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RESEARCHES IN ANATOLIA—VOLUME IV

THE ALISHAR HÜYÜK

SEASONS OF 1928 AND 1929

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VOLUME XIX

RESEARCHES IN ANATOLIA—VOLUME IV

THE ALISHAR HÜYÜK

SEASONS OF 1928 AND 1929

PART I

By ERICH F. SCHMIDT
Joint Field Director of the Anatolian Expedition

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PREFACE

The material presented in this publication is based mainly on the results of our second and third excavation seasons (1928–29). The results of the 1927 season were published in *OIP* VI and *OIP* VII.[1] The season of 1927 had been a test period during which certain fundamental points had been established. In 1928, with increased knowledge and improved equipment and technique, we established more delicate chronological distinctions of the periods from the Hittite Empire to the present. In 1929 we concentrated upon the strata preceding the Hittite Empire stratum. The first draft of this volume was written in the autumn of 1930. We hope that the material presented, illustrating hitherto unknown or neglected elements of the Anatolian culture periods, will furnish an archeological scale or chronometer for future investigators in this region.

The division of labor on the mound is dealt with in chapter i. In 1928 Dr. von der Osten made the scientific catalogues for the seals, figurines, and objects of metal and stone. The other excavation records and scientific catalogues were made by the writer, aided by Messrs. Richard A. Martin and E. K. von Brand. Mr. Martin made most of the season's photographs. In 1929 the surveys and descriptions of the excavated structures were made by Mr. J. S. Bolles and the writer. Mr. Martin made the scientific catalogues of the metal objects and recorded the numerous burials. Heavy stone objects were recorded by Mr. Bolles. Most of the photographs of specimens were made by Mr. Schüler. The drawings and paintings of pottery were made by Mehmet Ali Bey and Şemseddin Ruhi Bey.[2] Casts of outstanding objects were made by Reha Tachsin Bey. Dr. W. M. Krogman contributed a valuable study of the physical types of Alişar.[3] The writer recorded the remaining categories of objects: pottery, spindle whorls, figurines, seals, and objects of stone, bone, glass, and shell. He is responsible for the organization of the excavation work and the chronological relations of all objects excavated during the three seasons, and he combines in the present publication the information gathered by all co-workers.

We repeat here our acknowledgments of the courtesy and help received from the Turkish authorities, the American embassy in Turkey, and our colleagues in various parts of the world. We wish also to thank the members of the Oriental Institute, especially Dr. James H. Breasted, the director; Dr. T. George Allen, the editorial secretary, and his assistants, Miss Ruth C. Wilkins, Miss Ruth L. Schurman, and Miss Elizabeth Blaisdell; and Professor A. T. Olmstead, from conversations with whom the writer has received many valuable suggestions.

Beginning with this publication, we shall endeavor to use the current Turkish spelling for Turkish place-names as well as for personal names. The chief differences occur in the cases of *j*, *ch*, *gh* (mute), *zh*, *sh*, and *i* in diphthongs, for which the Turkish uses *c*, *ç*, *ğ*, *j*, *ş*, and *y* respectively. Thus Alishar is now spelled Alişar; Chalab Verdi is Çalabverdi; and Boghaz Köi becomes Boğaz Köy. Dotted *i* must have its dot even when capitalized; the undotted *ı* stands for the indefinite vowel.

In this work the terms "Alişar I" to "Alişar VII" inclusive are used interchangeably with "Stratum I" etc. (the layers of material remains) and with "Period I" etc. (the periods of time during which the corresponding strata were deposited). This is a more elaborate division than that employed in *OIP* VI, for our increasing knowledge has made more subdivisions neces-

[1] For abbreviations see p. xxi.

[2] Drawings of pottery found in 1927 had been made by Dr. von der Osten.

[3] Cf. p. 72, n. 1.

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sary.[1] Stratum I and Stratum II are numbered here as in *OIP* VI. The former Stratum III[2] is divided into Stratum III (pre-Empire),[3] Stratum IV (Hittite Empire), and Stratum V (post-Empire). Stratum VI includes Hellenistic, Roman, and Byzantine remains; and Stratum VII covers the Seljuk and Osmanli phases of the mound's history. Strata I–IV are described in this volume; Strata V–VII will be described in *OIP* XX.

Objects illustrated in this volume are, in almost all cases, identified by the numbers by which they are listed in the field catalogue. Field numbers preceded by "a" belong to objects found in 1928; those preceded by "b," to objects found in 1929. A few objects are included which were found in 1927. These have field numbers with no prefix. An italicized letter following a field number designates the object as part of a group. Numbers designating burials always include an "X."

Architectural divisions (rooms, roads, etc.) have been given numbers, while subsidiary units (walls, pits, etc.) are designated by italicized letters. Thus, "Wall 1*a*" is a certain wall bordering Section 1.

Measurements are given in meters and their fractions. The dimensions of individual objects are sometimes given in the text, but have usually been omitted where the scale is given with an illustration. The net squares marked on maps are 10×10 meters.

ERICH F. SCHMIDT

[1] [In addition, the work of 1930–31 has definitely revealed a Neolithic period and indicates that Period III largely preceded, instead of succeeding (cf. p. 25), Period II. See the Supplementary Note contributed by Dr. von der Osten to *OIC* No. 11, also his forthcoming discussion in *OIC* No. 14.—EDITOR.]

[2] Cf. p. 194, n. 4.

[3] In *OIC* No. 11, Stratum III is called "Early Hittite."

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LIST OF ABBREVIATIONS

AJSL	American Journal of Semitic Languages and Literatures (Chicago etc., 1884——)
Archiv or.	Archiv orientální (Praha, 1929——)
ASAE	Egypt. Service des antiquités. Annales (Le Caire, 1900——)
JSOR	Society of Oriental Research. Journal (Chicago etc., 1917——)
LAAA	Annals of Archaeology and Anthropology (Liverpool, 1908——)
MDOG	Deutsche Orient-Gesellschaft. Mitteilungen (Berlin, 1899——)
MVAG	Vorderasiatisch-aegyptische Gesellschaft. Mitteilungen (Berlin, 1896–1908; Leipzig, 1909——)
OIC	Chicago. University. Oriental Institute. Oriental Institute Communications (Chicago, 1922——)
OIP	Chicago. University. Oriental Institute. Oriental Institute Publications (Chicago, 1924——)
OLZ	Orientalistische Literaturzeitung (Berlin, 1898–1908; Leipzig, 1909——)
SAOC	Chicago. University. Oriental Institute. Studies in Ancient Oriental Civilization (Chicago, 1931 ——)
WVDOG	Deutsche Orient-Gesellschaft. Wissenschaftliche Veröffentlichungen (Leipzig, 1900——)
ZA	Zeitschrift für Assyriologie und verwandte Gebiete (Leipzig, 1886——)

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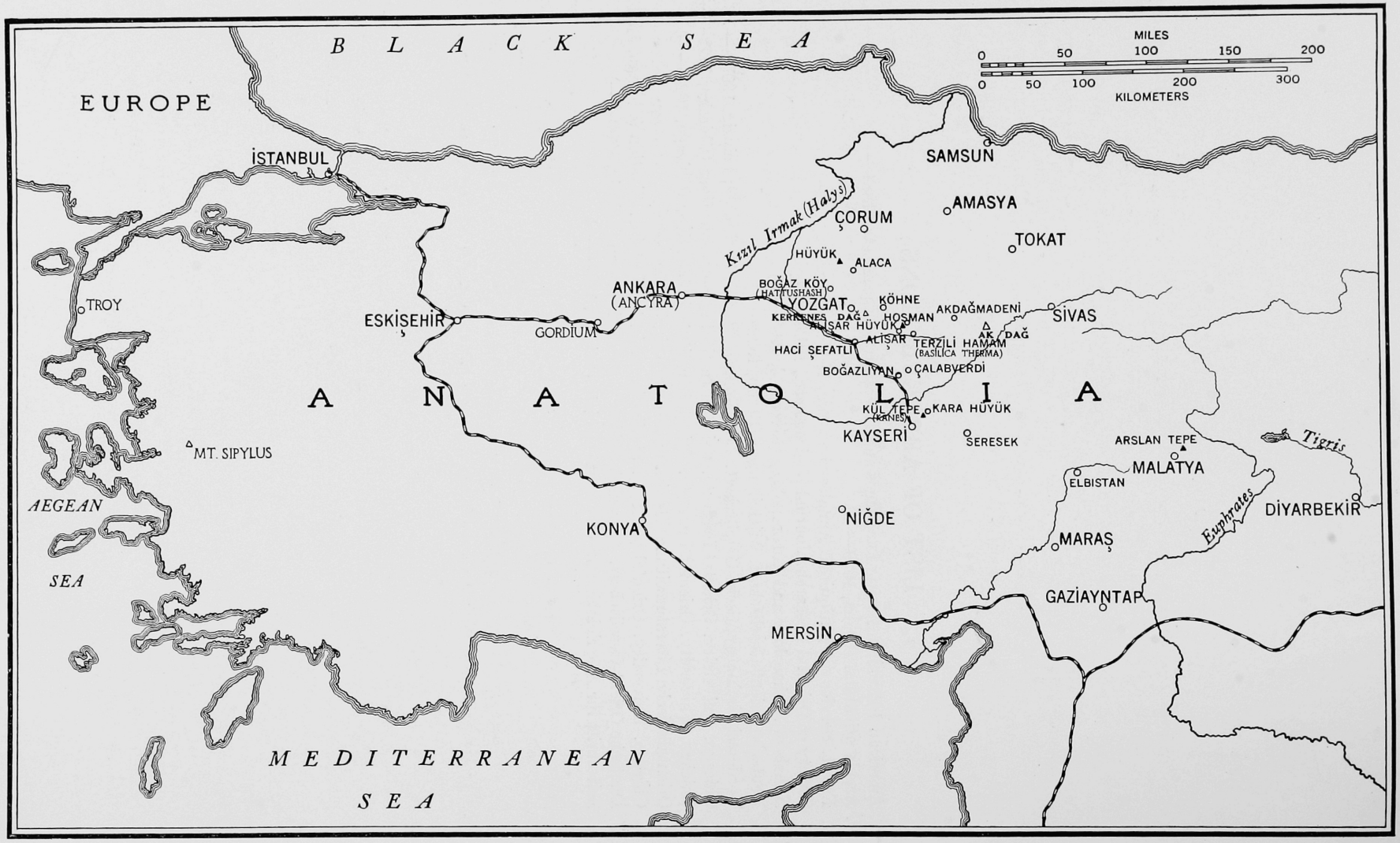
MAP



Anatolia

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I

THE EXPEDITION

The excavation of Alişar[1] Hüyük was begun in 1927 under the auspices of the Oriental Institute of the University of Chicago, directed by Professor James H. Breasted. The composition and the activities of the expedition during 1927 have been described fully in a previous publication.[2] Dr. H. H. von der Osten, who had discovered the mound during his explorations in 1926,[3] was the field director of the expedition, while the writer had charge of the mound work. The first season's work lasted from May 27 to November 1. The crew, starting with a small nucleus of ten men, increased to about 180 diggers, mainly Turks and Kızılbaş. At the end of the season we were occupied with laboratory work in camp and in the Ethnographical Museum in Ankara. The Ministry of Public Instruction, then headed by His Excellency Necati Bey, courteously permitted the export of a type collection of material. The export of unique specimens is prohibited by the existing antiquities law.

The staff members of the expedition left New York in April and May, 1928, for the second working-season in Anatolia. The field directors, Dr. von der Osten and the writer, took the North Atlantic route in order to purchase in France and Germany certain articles of equipment which could not be obtained in Turkey. Mr. Frank H. Blackburn, a member of the expedition in 1927, and Mr. Richard A. Martin, a student of anthropology from the University of Chicago, sailed on the Fabre Line directly to İstanbul, while Mr. E. K. von Brand, a new assistant, took the northern route.

By May 26 all the members of the expedition had arrived in Turkey. We did not stay long in beautiful İstanbul, but, as soon as we had laid in our photographic supplies, proceeded to Ankara, the present political center of Turkey.

Around the old town, surmounted by its picturesque citadel, is a rapidly broadening girdle of new buildings of a pleasing style combining oriental and occidental features. Government buildings, banks, hotels, foreign legations, and private houses are being constructed. Gazi Mustafa Kemal Paşa, the extraordinary leader of modern Turkey, is making a new metropolis out of this town, which in Roman times was the important city of Ancyra but later became an almost forgotten provincial settlement.

The effects of the Gazi's modernizing policies are visible everywhere. Men and most women wear European clothes. Only priests and religious teachers display the old-time fez, and the faces of only a few women are covered with the veil. The country women, however, loath to expose their mouths, still cover them with their shawls when a stranger is in sight.

The government officials with whom we had to deal were exceedingly courteous and helpful. The permit for continuation of the Alişar excavation had previously been given, but we had to obtain a permit for a test excavation on Kerkenes Dağ and a traveling permit for Dr. von der Osten. These were readily granted by the courtesy of the officials of the Ministry of Public Instruction: His Excellency the Minister, Necati Bey; His Excellency the Secretary of the Ministry, Nahi Atuf Bey; the Director General of Antiquities, Mübarek Galip Bey; His Excellency the Minister of the Interior, Şükrü Kaya Bey; also Ekrin Bey and Sabri Bey. We owe further thanks to the members of the General Staff. Members of the American embassy—

[1] Henceforth spelled in Turkish fashion; the form "Alishar" previously used indicates its actual pronunciation. The mound is located southeast of Yozgat; see map.

[2] *OIP* VI, chap. vi.

[3] *OIC* No. 2, pp. 33 f., and *OIP* V 89.

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Mr. Jefferson Patterson, Malik Bey, and later Mr. Ernest L. Ives and Mrs. Ives—were again numbered among our best friends.

On June 5, after our provisions had been purchased, we were ready to start for Alişar. We were greatly pleased that Ali Şerafeddin Bey, the earnest and efficient government commissioner of 1927, again joined our party. Mr. Franz Forsteneichner, of the staff of the Phytopathological Institute at Ankara, also accompanied us to the camp and stayed about a month. He became a great friend of ours and taught us much about the flora of the region.

As we have described elsewhere,[1] we traveled by the Ankara-Kayseri railroad as far as Haci Şefatlı, a station two and a half hours by car from our camp. Alişar camp had changed since we had last seen it. The camp superintendent, Mr. Reifenmüller, and his carpenter assistant, Mr. Scharer, had constructed new rooms and had added a vegetable garden and a building to shelter our sheep and chickens. A new Ford car had been bought—for about twice what it would cost in the United States. The purchase of a few thousand strong paper boxes and bags was another of many preparations which had been made toward a successful working-season.

Fig. 1.—The First Carload on the Field Railroad

Fig. 2.—Lorries Being Mounted in Camp

Mr. Martin, who had arrived earlier, was, in true anthropological fashion, already surrounded by the remains of some skeletons which had been accidentally uncovered by natives. Soon our old laborers from the near-by villages were cheerfully crowding the camp, to greet us and to inquire when the work would start. However, we first made a pilgrimage to the capital of the Hittite Empire.[2]

On the way we stopped in Yozgat to pay our respects to His Excellency the vali. We spent a night in Boğaz Köy, and next morning wandered about the ruins of the ancient city of Ḫattushash, admiring its sculptured gates and other architectural remains.[3] On our way home we passed Hüyük near Alaca, with its magnificent gate sphinxes and sculptured slabs.[4] It was a trip which inspired us for our work.

On June 12 the second season's work at Alişar began. For an almost uninterrupted period of two and a half months we dug with an average of 120 laborers. Since most of them had been trained during 1927, work was now somewhat easier for us. The two new assistants, Martin and von Brand, helped in camp and on the mound in watching and directing the laborers, in sorting specimens, and in typing manuscripts and catalogues. In addition, Martin was in charge of photography, while von Brand took care of the cars. Reifenmüller efficiently superintended the camp, garden, tools, and provisions, kept the accounts, and checked the laborers.

[1] Cf. *OIC* No. 8, pp. 13–16, for an account of the same trip as made in 1929.

[2] *OIC* No. 6, pp. 36–42. [3] Cf. Otto Puchstein, "Boghasköi, die Bauwerke," *WVDOG* No. 19 (Leipzig, 1912).

[4] Th. Makridi Bey, "La porte des sphinx à Euyuk," *MVAG* XII (1908) 177–205.

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As a former railroad man, he especially enjoyed laying the new field railroad (Figs. 1 and 2) with the assistance of Scharer. The staff and some guests appear in Figure 3.

In accordance with the general program of the expedition, Dr. von der Osten left on July 1 to continue his exploration of the eastern part of the country.[1] He was accompanied by our friend Professor von Mészáros, co-director of the Ethnographical Museum in Ankara, and by Mr. Blackburn. Early in July we opened a *tepe* southeast of Hosman, about four kilometers east of the Alişar mound, and found that it was a tumulus which had been heaped up over an ancient—and now empty—tomb.[2] In the beginning of August work at the mound was interrupted when Mr. Martin and the writer went to Ankara to arrange specimens for exhibition. There we spent a pleasant evening with Hasan Fehmi Bey, of the Ministry of Public Instruc-

FIG. 3.—STAFF AND GUESTS IN 1928: REIFENMÜLLER, BLACKBURN, ŞERAFEDDIN BEY, VON DER OSTEN, VON MÉSZÁROS, SCHMIDT, VON BRAND, FORSTENEICHNER, AND MARTIN, WITH MAURICE GARCENOT AND SCHARER SEATED

tion, Hakki Beha Bey, director of the museum on the *hisar*, and his daughter, Velidi Beha Hanım, who later studied at the University of Chicago. During this visit to Ankara we again had occasion to appreciate the courtesy of the Turkish officials.

While we were in Ankara, Reifenmüller, Blackburn, and von Brand moved our camp to the city on Kerkenes Dağ, which we intended to date if possible.[3] We had previously made several reconnaissances in order to familiarize ourselves with the extent of the ruins and to choose test spots. From August 11 to 18 we excavated small sections of the town and several tumuli situated west of it.[4] It was a strenuous time, and we were all rather glad to return to Alişar. Running short of funds, we stopped the actual excavation work, after a final rush, on August 25; but we stayed at Alişar until September 29 in order to arrange and repair the material, to complete the scientific catalogues, and finally to ship the specimens to Ankara, where they were stored and in part exhibited in the Ethnographical Museum. The officials of the Ministry of Public Instruction showed much interest in the exhibition, which was visited by many other Turkish gentlemen and by members of foreign legations also.

[1] *OIC* No. 6, pp. 7–10.

[2] *OIC* No. 11, pp. 25–27.

[3] *OIC* No. 6, pp. 135 and 137, and *OIC* No. 11, pp. 23 f.

[4] See *AJSL* XLV (1928/29) 221–74.

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After the exploration and excavation permits for 1929 had been prepared, we departed from Ankara on October 10 and went to İstanbul, where the members of the expedition separated. One group took the Mediterranean route, while the writer and Mr. Blackburn went to Berlin, where the latter matriculated at the Friedrich Wilhelm University. In November the rest of us arrived again in New York.

In 1929 the activities of the Anatolian Expedition[1] were much expanded, and the expedition was divided into two parts. Dr. von der Osten, as the head of the explorations and the ethnoarcheological survey, spent most of the season in the southeastern and eastern vilayets of Anatolia.[2] He was again assisted by Mr. Blackburn, whose work centered in the Alişar district.

The excavating staff was increased, for the first time, to an adequate number (Fig. 4). Mr. Martin now took care of all skeletal material (uncovering and recording numerous burials) and

Fig. 4.—The Excavation Staff of 1929: Ali Bey, Lockard, Bolles, Schmidt, Muharem Bey, Martin, Reifenmüller, and Scharer, with "Hüsseyn II," Alexandre Galenca, and Schüler Seated

of all the metal objects found during the season. The duties of Messrs. Reifenmüller and Scharer were the same as in 1928. The writer was in charge of excavation. The new staff members included our dignified new government commissioner, Muharem Bey, and Mr. Jack S. Bolles, from the School of Architecture of Harvard University. The latter made the topographical surveys and shared with the writer the work of making the surveys and descriptions of the excavated structures. Mr. Derwood W. Lockard, who had come from Chicago at his own expense, proved to be a capable field man. He took care of the office work, helped in surveying, drove whenever necessary, watched the laborers, and the like.

The new photographer, Mr. Hermann Schüler, established a camp darkroom. He photographed several thousand specimens, besides developing (under rather trying conditions) all the films exposed by the staff. Though Mr. Martin took most of the excavation photographs, many were made by other members of the staff also. With the kind aid of Namuk Ismael Bey, director of the academy of fine arts in İstanbul and one of the foremost painters of

[1] Its original designation, "Hittite Expedition," had proved too limited and had therefore been changed.

[2] Cf. *OIC* No. 8.

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modern Turkey, and of Professor Erich H. F. Weber, we secured the services of three Turkish art students (Fig. 5). These young men were Mehmet Ali Bey and Şemseddin Ruhi Bey, draftsmen and painters, and Reha Tachsin Bey, a sculptor. They drew designs and cross-sections, executed paintings of the most striking specimens, and made casts of various objects.

Alexandre Galenca (cf. Fig. 4), our splendid cook from Marseilles, was loaned us by the Belgian embassy in Ankara. "Hüsseyn II" (Fig. 6) was a somewhat easy-going but careful chauffeur from İstanbul.

The staff members gathered in Ankara. Messrs. Martin and Scharer came from Iraq, where they had worked under Professor Edward Chiera as members of the Khorsabad Expedition of

Fig. 5.—Our Artists: Mehmet Ali Bey, Şemseddin Ruhi Bey, and Reha Tachsin Bey

the Oriental Institute. Mr. Schüler came from Berlin. Mr. Bolles arrived from America early in June. Mehmet Ali Bey, "Hüsseyn II," and Alexandre had been employed in İstanbul and Ankara. We now had a full staff. Only one member, an epigrapher, might have to be added should numerous cuneiform records appear.

In Ankara we were received courteously by the Minister of Public Instruction, His Excellency Cemal Hüsnü Bey, successor of His Excellency Necati Bey, who had died during the preceding winter. On this and later occasions we had much reason to appreciate the interest and help shown us by all the members of the Ministry of Public Instruction, including Mehmet Emin Bey, the Secretary of the Ministry; Hasan Fehmi Bey, the successor of Mübarek Galip Bey as Director General of Antiquities; Hamdullah Suphi Bey, the president of the Türkocak; and the co-directors of the Ethnographical Museum, our friends Professor von Mészáros and

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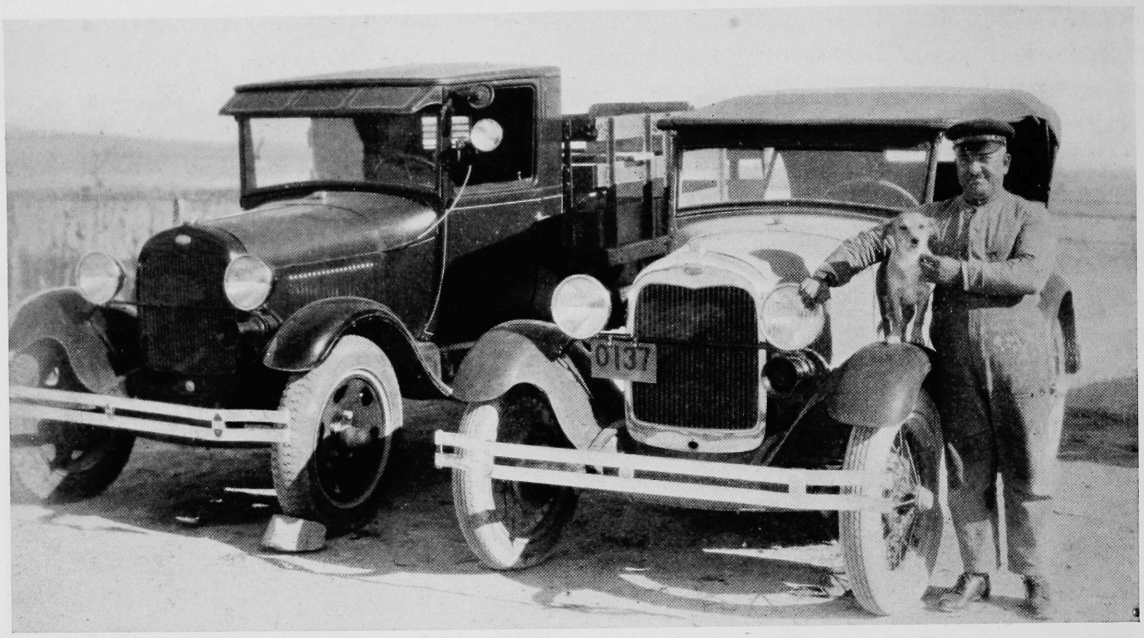

Fig. 6.—"Hüsseyn II" and the Cars

Fig. 7.—Alişar Camp in 1929

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Hamit Zübeyr Bey. At this point also may we express our appreciation to His Excellency Şükrü Kaya Bey, Minister of the Interior; to Halil Edhem Bey and Th. Makridi Bey, of the National Museum in İstanbul; to the gentlemen of the American embassy in Ankara, Messrs. Sheldon L. Crosby, Jefferson Patterson, Eugene M. Hinkle, and Malik Bey; to our friends Mr. J. Aggiman and Dr. von Eichhorn; and to many others who helped us during the various phases of our work.

We left for camp as soon as the Ministry of Public Instruction had appointed our new government commissioner, Muharem Bey. Mr. Reifenmüller had prepared for the beginning of work. Such equipment as surveying instruments, cameras and photographic supplies, stationery, books, personal field equipment, material for restoration and preservation of antiquities, office

Fig. 8.—Removal of the Mound Crust in a Test Plot

equipment, and the like had been purchased in America, France, and Germany. Camp equipment, tools, and provisions were acquired or could be ordered through agencies in Turkey.

The camp was still rather primitive in 1929 (Fig. 7), though much less so than during our first season. Its two buildings were constructed of sun-dried bricks on stone foundations, with roofs of wood and corrugated iron. There were also several tents, a shelter for the carpenter and the mechanic in the center of the camp site, a building to house our sheep and poultry, a vegetable garden, a gasoline shack, and a toilet with "occidental" and "oriental" divisions. In one of the main buildings were the room for the government commissioner, the dining-room, the kitchen, the workroom (at the same time bedroom) for the artists, and a room reserved for Dr. von der Osten. In the other main building were the room occupied by Reifenmüller, who kept the supplies and tools, the rooms of Blackburn (later of Dr. Lyon), Martin, and Schüler (with darkroom equipment), and an office which served as a storeroom for the specimens. The

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writer's tent adjoined the office; Bolles and Lockard also were accommodated in tents; the cook, the carpenter, the chauffeur, and the servants had conical tents. Two tents were reserved for storing material and for the accommodation of guests.

Dr. von der Osten, accompanied by Mr. Henry J. Patten, a good friend of the expedition, had already started on his explorations when the third excavation season at the Alişar mound began on June 15. Beginning with 125 men, the number of diggers was finally increased to more than two hundred. Camp life and general discipline followed about the same lines as previously; but the camp circle was wider, and with a larger staff more specialization in the work was possible.

We followed a strict daily routine: rise at half past five; start work at six; first intermission from half past eight until nine, the staff members on mound duty having their breakfast on

Fig. 9.—Uncovering a Kerpich Wall

the mound; second intermission from twelve until half past one; stop excavation at half past five; work on records as long as required by the daily results; supper and taps accordingly. As a rule, by ten o'clock everyone had retired. On Friday, the Moslem day of rest, usually only emergency work at the mound and laboratory work in camp were carried on. Often part of this day was used for trips about the neighborhood or for a bath at the hot spring of Terzili Hamam (Basilica Therma).

Native laborers were trained for the various phases of the work. Picks were used in loosening the ground (Fig. 8). Old hands were employed on this job in order to prevent damage as far as possible. They had been trained to watch the soil for the occurrence of *kerpich* (sun-dried brick), spots with discolored dirt, etc. (Fig. 9). Each had a trowel and a whisk broom for clearing such spots. Small hand picks also were provided. Shovelers followed, throwing the dirt up over the edge of the square, where other men were stationed to keep the edge clear and to screen the dump-soil through one-centimeter screens. Most of the specimens found were recovered by the pick men; very few escaped the shovelers and reached the screen. We

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did not screen such deposits as crumbled *kerpich* walls and rubble, the débris which accumulated during the removal of architectural levels. The excavating of burials, vessels, and the like was done by staff members with delicate dental tools, spoons, and brushes.

The removal of dump-soil (Fig. 10) is an important problem. During the first season we had to use wheelbarrows; and though we kept more than forty in constant use the dump-soil always accumulated faster than it could be removed, hampering the progress of the work (Fig. 11). A small field railroad saves labor and expense and is an essential part of excavation equipment. We obtained one during the season of 1928. By the courtesy of Ahim Bey, director general of the Anatolian railroads, we were able to borrow extra lorries in 1929, increasing the number in use from five to nine. The number of cars depends, of course, on the number of men at work and the distance from the mound edge to the dump (Fig. 12). The lorries, each holding three-quarters of a cubic meter, were run by three men, because the cars had to be pushed up the

Fig. 10.—Removal of Dump-Soil in Wheelbarrows and Lorries

Fig. 11.—Rubbish Accumulating from the Excavation of Terrace Plots XVII, XIV–XVI, and XXVIII–XXIX. Main Mound (A) in Background

slope on their way back to the loading-point (Fig. 13). From certain spots which could not be reached by the tracks, the dirt had to be transported for a short distance in wheelbarrows.

Chutes of wood in which dump-soil and rocks were sped downhill (Fig. 14) saved time, protected structural remains, and shortened the route of the lorries. Steel chutes are better, but

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they were not available. Rather primitive pulleys with buckets (Fig. 15) were used in deep squares to facilitate the removal of the dump-soil. Test Plots L 14–15 were so deep, however, that we had to cut a road through the mound slope, deepen it and strengthen it by beam supports with the progress of the test, and use it as a passage for wheelbarrows (Fig. 16).

The topographic surveys were made and the plot stakes were set by means of a Keuffel and Esser theodolite with accessories. For the surveying of the excavated structures, done within units 10×10 meters square, several of the convenient Brunton transits were used, together

Fig. 12.—The Dump at the End of 1929

Fig. 13.—Work on Mound A in 1928. The Return of Emptied Lorries

with levels, though the plane-table may be preferable. Measuring-chains and tapes, collapsible steel rules (constant companions of every archeologist), iron pins, various kinds of stationery, and drawing-boards with accessories completed the equipment. The metric system was used throughout.

Our cameras included a 13×18-centimeter Zeiss Universal Juwel and a 9×12-centimeter Universal Juwel during the first two seasons. The latter was replaced in 1929 by a 9×12-centimeter Miroflex, more practical for moving objects, since it allows focusing to the moment of exposure. Time exposures were made on tripods supplied with tilting tops. In addition, almost every member of the staff had a smaller camera. The film packs and cut films were

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mostly Agfa of various grades. Darkroom equipment for developing and printing was rather primitive, in keeping with camp conditions. A Bell and Howell moving-picture camera, Eyemo, with tripod did good service. The films for it were panchromatic and superspeed, normal size (35 millimeters), well protected in individual tin boxes and prepared for daylight loading.

In 1929 the expedition had two Ford cars of the new model (cf. Fig. 6). The "mileage" of the touring car which had been used by Dr. von der Osten during his explorations of 1928 was about 25,000 kilometers at the end of 1929, and signs of age were marked. Another Ford touring car of the same model, used in Dr. von der Osten's explorations of 1929, proved the value of non-shatterable wind shields.[1] The 1½-ton truck purchased in 1929 did splendid service and promised to last for a considerable time.

FIG. 14.—WOODEN CHUTES ON MOUND A

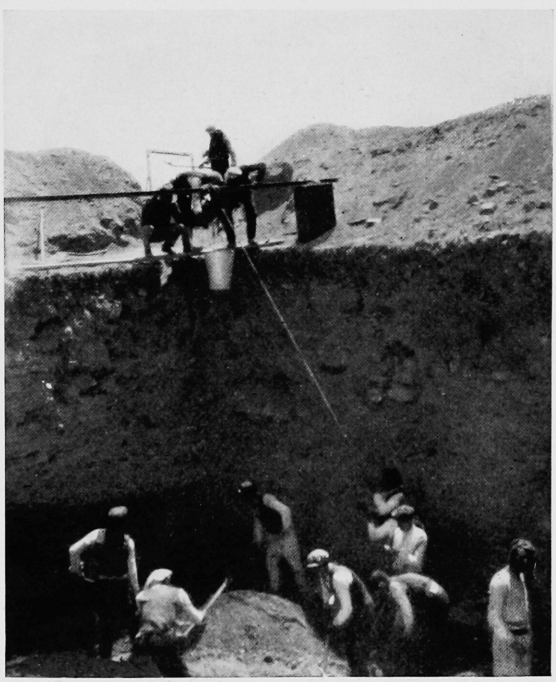

FIG. 15.—PULLEY WITH BUCKET IN PLOT R 6

The camp layout has been mentioned. Tables, chairs, shelves, etc., were homemade. Beds, linen, tools, mechanical parts, the kitchen stove, petrol heaters, dishes, "silver," etc., were purchased in İstanbul, Ankara, or Yozgat. Firewood was brought to camp from the rather distant Ak Dağ (Fig. 17). Wash water was available in the near-by creek, but drinking-water came from a spring on the far side of the mound and from the village of Alişar and was hauled to camp and to the mound on donkeys.

Meat was furnished by a small stock of sheep, goats, chickens, and turkeys. There were, of course, no pigs because of the Moslem environment. Sometimes a buffalo calf had to substitute for beef. Vegetables, scarce at times, had to be brought from Ankara, together with certain canned foods and preserves.

The most appropriate personal equipment for work at the mound consists of high boots, breeches of both light and heavy material, khaki shirts, a broad-brimmed Stetson hat, and much underwear. A warm leather jacket and a raincoat are essential. Spring is cold, fall even colder, and rainstorms occur frequently. For transport and storage very strong trunks are

[1] See *OIC* No. 8, Fig. 162.

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required. Travel and town equipment were stored in Ankara, for only field equipment could stand the wear of camp life, and the provincial officials were considerate enough to ignore camp attire during calls. Weapons are not essential in Turkey, since the country has been thoroughly cleared of bandits by the new government; but an automatic gives the wearer a feeling of safety during the transport of funds or during their presence in camp, for holdups still occur sporadically.

At the beginning of the 1929 season the usual visits to the governor of the vilayet, A. Riza Bey, to the kaimakams of Köhne, of Akdağmadeni, and later on, of Boğazlıyan, confirmed our good relations with the provincial officials. As usual, the villagers of the neighborhood rejoiced at the start of work. They made a substantial material gain by the excavation and considered it "a gift of Allah," as the venerable *hoca baba* of Alişar put it.

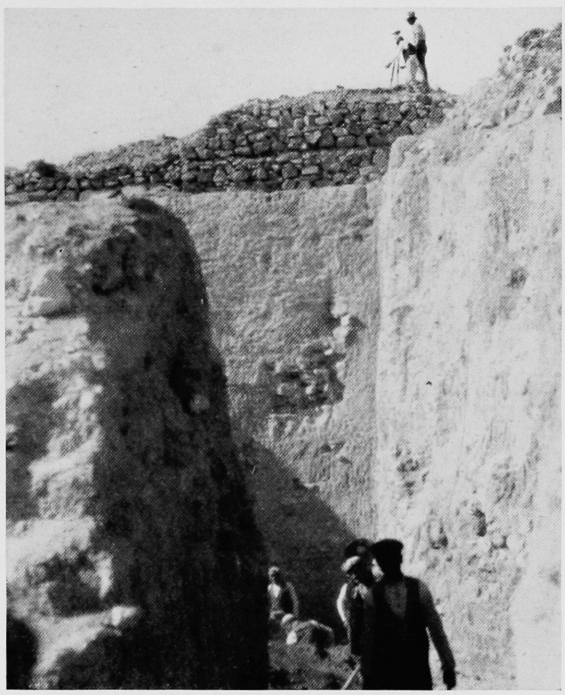

Fig. 16.—Road Cut through the Mound Slope to Reach the Lower Levels of Plots L 14–15

In July we welcomed to camp Professor Martin Sprengling from the Chicago headquarters of the Institute. At the same time Dr. von der Osten returned from his first successful exploration trip of the season. An automobile accident during his second trip cut short his work toward the end of August, and he had to leave for America. From August until October Dr. Darwin O. Lyon was our guest and the medical adviser for the whole district. He took care of

Fig. 17.—Hauling Wood to Camp on Arabas

the only serious accident that happened during the three seasons of excavation. Because of the playfulness of a lorry-driver, a man fell off and broke his nose. Dr. Lyon set it, and there was no permanent injury. The total elimination of accident in the often dangerously deep trenches was due to the watchfulness of the supervisors on duty. The plot walls were given a slight slant, protruding rocks were carefully removed, and the tops were kept free.

In August a small party from the Phytopathological Institute passed through the camp. They were Professor and Mrs. K. O. Müller, Mr. Franz Forsteneichner (our fellow-worker of 1928), and an interpreter.

In the middle of August we interrupted the actual excavation for a week in order to work up the scientific catalogues and other records. Here it may be emphasized once more that the entire material must be recorded and described in detailed scientific form while we are still in Anatolia, since few antiquities may be exported. Almost a third of the working-season must be devoted to this task.

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The climax of the season of 1929 was August 25, the day when we found, in Stratum II, the first cuneiform tablet discovered at Alişar.

During the second half of September the excavation was again interrupted. Mr. Bolles and the writer made a reconnaissance trip to Malatya in order to inspect the Arslan Tepe for a proposed test excavation. At this mound digging by the natives had exposed sculptures of the post-Hittite Empire period, some of them previously known, others first noted by Dr. von der Osten.[1] Though the test excavation was postponed, Mr. Bolles made a careful topographical survey of the exceedingly promising site.[2]

Fig. 18.—The Preliminary Exhibit of 1929 Material in the Ethnographical Museum at Ankara

On October 14 one of the sudden gales typical of the Anatolian plateau swept across the region and wrecked part of our camp. The strengthened tents stood the squalls with the aid of the workers, but the roof of a wing of one building was torn off. Sheets of corrugated iron sailed through the air and endangered people below.

The finding of a second small fragment of a cuneiform tablet in Stratum II on October 16 checked sufficiently the evidence furnished by the first.

October 20 was the last working-day of 1929, a successful season. A few workers were kept to finish the last test square. Now the final phase of the season's work started. Masses of material had accumulated; many specimens had been recovered, and each had to be measured and described in detail, as far as that had not been done previously. The objects had to be sorted and photographed. For protection all the photographs were pasted on stiffer sheets of paper and were arranged according to the scientific descriptions, together with drawings,

[1] *OIC* No. 6, pp. 87–98, and H. H. von der Osten, "New Sculptures from Malatya," *AJSL* XLV (1928/29) 83–89.

[2] *OIC* No. 11, pp. 34 f.

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paintings, and great numbers of architectural surveys. The skeletal material had to be worked up anthropometrically as far as was possible in the field, the material had to be packed with great care, and so on. Toward the end of October it grew colder, and petrol stoves were kept burning to heat laboratory rooms and tents.

The writer went to Ankara for a few days to prepare for the arrival of the expedition. We had learned by previous experience that our stay in hotels was a heavy burden on the budget. So we rented a small house at Mimar Sokağı, No. 3, in Yenişehir, the new suburb of Ankara. The rent of the whole house for a year was considerably less than the cost of a few weeks at a hotel, and at the same time we were sure of agreeable working-quarters. The writer informed the Ministry of Public Instruction that work had been closed for the season, arranged for the transport and storage of material and for a preliminary exhibition in the Ethnographical Museum, and then returned to camp.

Mr. Bolles soon left to join the Luxor Expedition of the Oriental Institute. At intervals boxes of material were transported to the nearest railroad station, Haci Şefatlı, and a car was ordered to accommodate the bulky shipment. Finally the last truck load, with most of the members of the expedition on board, left camp on November 5. After the truck had been stored in the village of Alişar, the chauffeur and Mr. Reifenmüller journeyed (with forced intermissions) to Ankara in the older of our faithful Fords.

Our first duty in Ankara was to prepare the preliminary exhibit of the 1929 finds. We were aided in every possible way by Hamit Zübeyr Bey and Professor von Mészáros. During this time Mr. Charles Breasted arrived as official representative of the Oriental Institute. He expressed the appreciation of the Institute to the governmental departments concerned and attended the opening of the preliminary exhibit in the Ethnographical Museum (Fig. 18). This exhibit was visited by officials of the Ministry of Public Instruction, including the Secretary of the Ministry, Mehmet Emin Bey, and the Director General of Antiquities, Hasan Fehmi Bey; by Hamdullah Suphi Bey, the brilliant leader of the Türkocak; and by other *literati* of the new Turkey.

The scientific laboratory work could not be completed before the middle of December. Meantime, welcome guests occasionally gathered in our little expedition home. The staff scattered gradually from December 15 on, as soon as individual tasks were completed. The expedition house was rented to Austrian civil engineers. The last of the staff members, the writer, left Ankara on December 24. He spent some time in İstanbul awaiting the arrival of an export permit for a type collection of specimens, and sorting and arranging with Mr. Reifenmüller the voluminous material of manuscripts and graphical records.

The application for the export of antiquities had to be indorsed by the Council of Ministers, after a special commission had inspected the objects to be exported and had determined their character as duplicates. Much to our regret, the Ministry of Public Instruction could not comply with our wish to borrow the two cuneiform tablets, the coins, and the skeletal remains of human beings and animals for examination by specialists. Fortunately, Reha Tachsin Bey, our skilful young sculptor, had made good casts of the tablets, one of which was fairly well decipherable.[1]

The export permit arrived early in January, and the writer left at once for Europe and America. At the beginning of February, 1930, he arrived in New York on the ill-fated S.S. "München," which exploded at the pier. Fortunately, the expedition material had been safely removed.

[1] Later the government of Turkey permitted us to borrow the cuneiform tablets for a time. Cf. p. 141.

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II

THE EXCAVATIONS

The present volume is being written after the third excavation season at Alişar has been completed. Various important buildings (or parts of buildings) have been uncovered. The culture sequences of material finds seem to be established, and the local strata have been roughly associated with the general culture periods of Asia Minor. Still, compared to the great volume of the mound,[1] the excavation has hardly progressed beyond the testing stage. The test trenches and squares have given us approximate information about the settlement history of the mound, especially its vertical growth and horizontal extent during the successive periods. However, the base deposit of the most prominent section of the *hüyük*, Mound A, has not yet been struck; and other extensive areas are still blanks on the excavation plan.

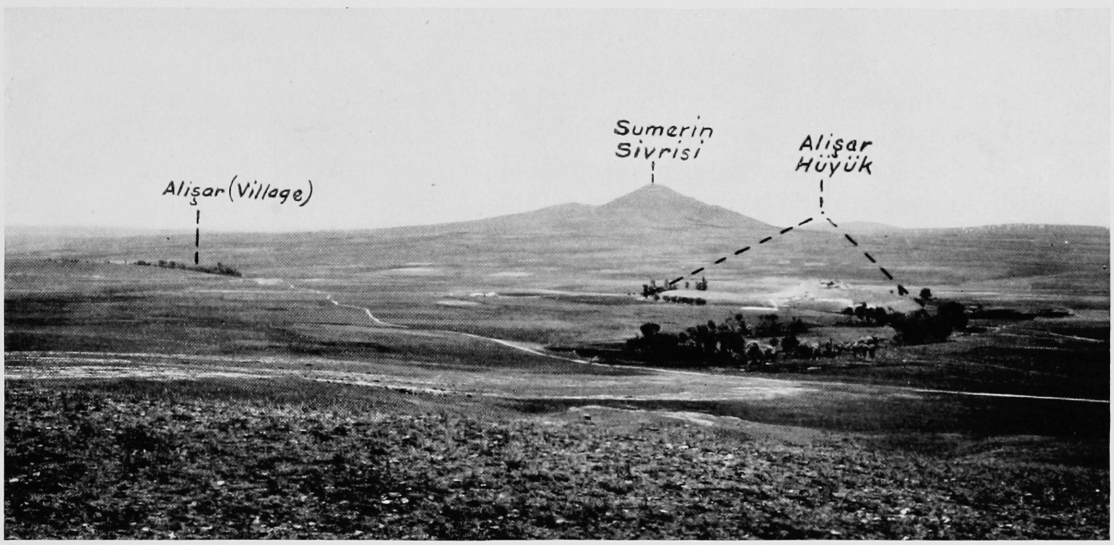

Fig. 19.—The Alişar Hüyük and Environment from the East

Before the start of any excavation, the leader should have a complete topographical survey of the site; and the square net should be fixed in that section which he intends to excavate first. The setting and topography of the Alişar mound (Fig. 19), which formed the subject of our investigations, have been described at length in the account of our first season's work.[2]

The course of an excavation depends on various factors. Preliminary testing in carefully recorded squares (either isolated or connected in trenches) is advisable, as it furnishes a general idea of the horizontal and vertical extent of the strata and indicates what sections promise the fullest possible information about one or more phases of the mound's history. But the information obtained in test squares is necessarily incomplete. We wish to emphasize that it was, and still is, our aim to excavate extensive areas layer by layer and to subdivide them into relatively small recording units, thus gaining complete information about the remains of each stratum and its subphases. But where conditions do not permit general excavation by means of stratigraphic plots divided into small arbitrary layers and sections, it is advisable to make at least a

[1] Some 750,000 cubic meters according to our estimate.

[2] *OIP* VI, chaps. ii and iii.

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test plot of this sort in order to check and amplify or correct the information obtained elsewhere.[1] The funds and time available and the relative importance of the various areas, judged by their fertility in outstanding remains, are factors which dictate the course of the work.

A 10×10-meter square is our unit of recording.[2] A square selected for excavation is marked by stakes set with the aid of a theodolite and connected by cords. Then paper bags for the sherds and paper boxes for the specimens are marked with the date, plot number, and depth. As soon as architectural remains are struck, the level and the preliminary numbers assigned to rooms, passages, pits, etc., on the plot sketch are added to the find-data. The chief finds are deposited in paper boxes as soon as they are uncovered. Sherds, shapeless chips of metal, fragments of shell, bone, wrought stone, etc., are put in paper bags. Important specimens are photographed *in situ*.

A log book records the progress of the excavation in each plot. A field book contains sketches of the levels, also the find-data of vessels and some other outstanding specimens, with their associations. Other specimens are recorded in notebooks which state the find-conditions and the number of the laborer, who receives a bonus for each object found. Burials are recorded separately.

Each day after the close of the work the records of the staff members are collected. The specimens are cleaned, entered in the field catalogue, and given their field numbers. The field catalogue is made in duplicate. In one section the objects are entered under consecutive numbers; in the other, according to plots. In the field catalogue are entered the date of find, serial number, plot, find-spot, a short description of the object, and a principal measurement. Sherds are washed, then recorded in a special sherd catalogue, an often tedious but immensely useful work. Shapeless fragments are merely noted. A bonus list records the amounts due the various laborers for their finds. The diggers are numbered to facilitate the administrative work.

There is hardly time to make the scientific catalogues while the excavation is proceeding. The final records are made during intermissions of the excavation or after its end. Certain objects, such as vessels, burials, and (in 1929) metal, are dealt with on special blanks. Other series (e.g., series of bone pins, mace heads, and beads) are sorted and recorded statistically. Such statistics, if arranged systematically, show at a glance the correlation of certain features. These scientific records contain all the measurements and descriptive data available, as well as the associations of such guide objects as vessels. The associations of less important objects are determinable by consulting the field catalogue of individual plots and the sherd catalogue.

Each object has to be photographed—smaller specimens in groups, larger ones individually, and all, if possible, according to a definite scale. In 1929 we used scales 1:1, 1:2, 1:4, 1:8, and 1:12. Diagrams of objects (particularly of vessels), drawings of details and of designs, and paintings complete the records.

Pots, as the most general, and therefore most important, "guide fossils," were carefully recorded as to find-spot and associated objects. In addition to the find-data the blanks of the scientific catalogue record the following features: height; diameter of rim, body, and bottom; thickness of neck, body, and bottom; shape of handle, rim, body, and bottom; technique; surface; decoration; period; and associations. Photographs, cross-sections, drawings of designs, and paintings supplemented the descriptions. Most vessels were broken and had to be mended with ambroid cement. Gaps in fragmentary vessels were filled with plaster of Paris.

The preservation and recording of burials required a different technique. Small dental spoons and scrapers and paint brushes were used in uncovering the valuable skeletal remains.

[1] Cf. *OIP* VI 214–16.

[2] This standard square and some details of method were not adopted until 1928; irregular areas were used in 1927. Cf. pp. 18–19; also *OIP* VI, chap. v.

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Protected against sun and rain but exposed to the air, they were left in the ground to harden. During this time the field notes were made on special blanks recording, in addition to the usual find-data, the position of the body and its individual parts; the direction, defined, if possible, by the spinal column; age and sex; mortuary gifts; and general associations. General and detailed photographs were taken of each burial and group of burials. Paraffin, white shellac, or a thin solution of ambroid cement was used in preserving and mending *in situ* and in the laboratory. Strips of cloth soaked with plaster of Paris gave extra protection, especially to the skulls, during transport. Anthropological field measurements were taken of those skulls which were fairly complete or which could be repaired in the field. Complete anthropological recording in

FIG. 20.—EXCAVATED STRUCTURES READY FOR RECORDING

the home laboratory was not possible, since the osteological material is in the collection of the museum at Ankara.

Though the task of recording excavated structures (Fig. 20) is sometimes difficult, it is one of the most important. The architectural remains subdivide the mound more closely into vertical units than do ceramic changes. It is true that structural remains in themselves have little or no value as chronological criteria. But once they have been dated by other remains (pottery, spindle whorls, metal, etc.), their slight variations in levels may subdivide the culture periods and furnish additional clues to the settlement history.

Surveys and cross-sections are indispensable for recording the structures. The symbols used represent as clearly as possible the actual objects, so that the types of walls, for example, may be seen on the drawings. Cross-sections follow either a plot line or a middle line of a square. Plans and sections of structural details, such as wall constructions, superpositions, fireplaces, etc., are made to a larger scale.

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The descriptions consider first such general aspects as relations in time to the deposits above and below; relations to other structures on the same level; color and texture of the soil; and determination of architectural units such as buildings, rooms, and passages, and (if possible) their purposes. The description then narrows to details, such as measurements of individual *kerpich* bricks, stones, etc., which are of interest to only a limited number of readers. Drawings may often replace words where the relative importance of a building does not require detailed explanations. Our files contain detailed descriptions and surveys of all structures; but records of many individual plots are omitted from this volume, for they are of value only in connection with the adjacent sections of still unexcavated buildings. Photographs of structural complexes and details complete the records.

The difficulty in architectural recording lies in determining the relations of fragmentary remains. Plot F 14 (p. 194) is a good example, but the situation in this plot is paralleled more or less everywhere in the mound. In only a few cases were clear-cut architectural remains encountered. As a rule, only low foundations were preserved; and some walls, or even whole sections of buildings, have crumbled down the slope. Throughout its history, later occupants of the mound have rifled earlier structures for stones for their own buildings. The wall stones found in Stratum I are sharp-edged, whereas the stones of later buildings have edges blunted by repeated handling. Parts of buildings were reoccupied by later settlers, who added new sections or built new walls on older foundations. At some places differences in level were exceedingly slight. Foundations intermediate between the main levels may have originated during the period of either the upper or the lower level. At the mound slope, buildings of later periods had been constructed on the same level with earlier houses. A complex of this type is a veritable labyrinth of foundations.

As a rule, the building history can be traced in level differences (often trivial) of foundations and fireplaces, in floor stratifications, in differences of wall types, in the extent or varying degree of discolorations, and the like.

EXCAVATIONS OF 1927

The areas excavated in 1927 (Fig. 21)[1] were described in a previous volume.[2] To summarize: We excavated small plots only. A series of plots formed a trench extending across Mound B to the top of Mound A; other trenches were located in the northeastern section of the terrace (cf. Fig. 11). These plots and the architectural remains found in them were our units of recording. After the mound crust had been removed, objects apparently of Roman origin appeared. Below them followed a complex series of architectural remains. By the end of the season we had uncovered portions of several important fortifications:[3] the "main *kerpich* wall" on Mound B, later attributed to Period V; the "citadel wall," now attributed to Period IV; and a section of a town wall of Period V. At certain spots we had penetrated to the bottom of the culture deposit. The bewildering mass of pottery had been sorted into chronological divisions.[4] The sequence of most of the architectural remains and of the bulk of other finds made in 1927 was vague, however, because of the limited area covered. With the continuation of work during the succeeding seasons our knowledge increased.

[1] Experience has taught us that the 2.5-meter contour lines of the Alişar Hüyük map are too far apart. The contour lines should be only 1 meter apart, in order to mark more delicate irregularities of the mound topography.

[2] *OIP* VI, chap. vi. For location of 1927 plots on the square net used from 1928 on, see Fig. 377.

[3] *OIP* VI, chap. vii and pp. 182 ff.

[4] *OIP* VI, chap. viii.

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EXCAVATIONS OF 1928

During the season of 1928 the system of excavation plots was changed into a rigidly oriented square net composed of 10×10-meter units, a size which we found very satisfactory indeed. During the sectioning of deposits, it is necessary to determine accurately the relation of each structural point, vertically as well as horizontally, to every other point. Oriented plot limits

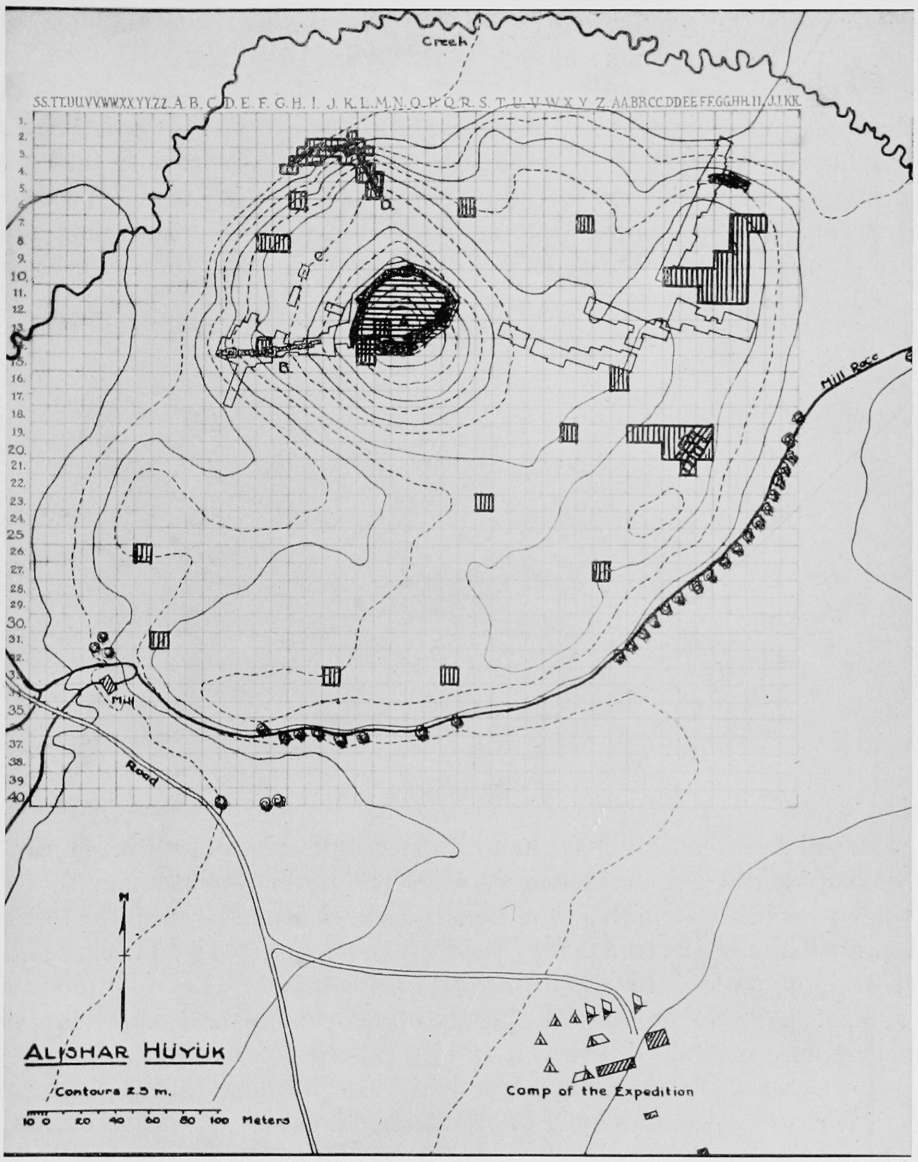

FIG. 21.—PLAN OF THE ALIŞAR HÜYÜK, SHOWING THE EXCAVATIONS OF 1927 (OUTLINED), OF 1928 (HORIZONTAL HATCHING), AND OF 1929 (VERTICAL HATCHING). IMPORTANT STRUCTURES ARE MARKED IN HEAVY BLACK

inclosing areas of uniform size are essential for such accuracy and overrule the advantages of the more flexible system used in 1927. The 10×10-meter square is also advantageous for surveying in general wherever the metric system is employed. The square net, extended farther in 1929, was designated by a co-ordinate system of letters and numbers.

The recording of the finds followed approximately the same lines as in 1927. The units were

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plots and levels. Where there were architectural units or burials, they were used to define position; but if there were no such associations, the depth below the surface or the position between the levels was used. The find-spots of vessels and other large objects were mapped. In 1928 also we started a special potsherd catalogue in which all the numerous fragments which had any special characteristics were recorded according to their find-spots. These sherd records were of inestimable help. They were in many cases the only means of determining the level and consequently the approximate age of structures and specimens. The sherds were kept apart, according to excavation units, in a sherd yard (Fig. 22).

In 1928 we concentrated our work on Mound A, hoping that the culture strata in this highest part of the *hüyük* would correspond to those of the town terrace, or possibly exceed them in number. We hoped also to find well defined structures not too extensive for complete excavation. We sectioned the mound and carefully sliced off level after level. We uncovered, recorded, and removed entire architectural complexes and their contents, thus obtaining the most complete information possible about definitely limited areas. In this manner we deter-

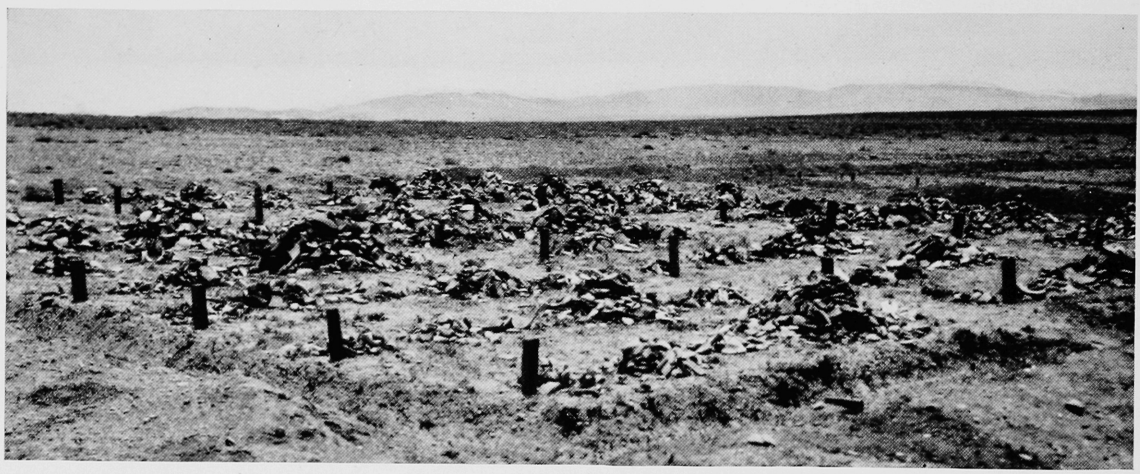

FIG. 22.—THE SHERD YARD

mined four principal architectural levels and obtained indications of a fifth (Fig. 23). At the end of 1928 we had identified structures in Stratum VI[1] (Level 1) as Roman, although the objects found there were less instructive than those which we found later on the terrace; we had gained a rather good idea of the contents of Stratum V, represented by Levels 2 and 3; and we had uncovered a large part of the Hittite citadel of Stratum IV (Level 4), obtaining a very helpful collection of Period IV objects. Within the citadel wall several sublevels of Stratum IV were indicated by differences in floor levels and by superpositions of foundations. The most striking pottery was associated with the lower sublevels. We hope that in the future this important, but rather complex, citadel will be thoroughly excavated.

In Plot L 14 we penetrated to Levels 5 and 6 (cf. Fig. 23). During our previous work here, in 1927, the layer directly below the surface had yielded mixed classical (Period VI), post-Empire (Period V), and Hittite Empire (Period IV) remains, those of the first two periods having rolled down from the mound top. Period IV remains prevailed in the talus which had formed outside the citadel wall. At a depth corresponding to the base of the citadel wall, Period IV ware was replaced by that of Period III. No architectural remains of Level 5 (Stratum III) were encountered in this plot, though that layer was more than 2 meters thick (cf. Fig. 28). However, since there were signs of wall tops at the floors of some Level 4 rooms

[1] These are the designations of the culture strata as established in 1929.

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elsewhere, we assumed the presence of Stratum III structures nearer the center of the mound. In this level in Plot L 14 we found hundreds of typical Period III sherds, apparently discarded objects, and a beautiful large jar. This jar (a 1072, Fig. 257) was found 1.90 below the base of the Period IV wall and had probably been cached just outside a Period III building still hidden below the superimposed Alişar IV citadel. Almost 3 meters below the Period IV wall we struck Level 6. Here we found a type of ware so distinct that we named both the pottery and the level "early Alişar III." Mixed with this pottery was the typical red ware of Period I, which showed that we had reached the bottom of Stratum III.[1] Stratum II was absent, though we had found it in the town terrace during 1927. This gave us an important clue for the work of the third season.

EXCAVATIONS OF 1929

In 1929, in accordance with the wish of Professor Breasted, the director of the Institute, we were to test the Alişar mound in its entirety for intelligible written records of the Hittite culture period. We were confronted with the task of finding such records in a veritable mountain of structural remains and detritus, deposited in irregular fashion during about 5,500 years.

We considered the possibilities of the various strata. At Boğaz Köy cuneiform records of Hittite kings had been found. During a visit to the site of Ḫattushash in 1928 we had picked up potsherds like those of Alişar IV on the surface and had obtained a number of identical fragments from the Boğaz Köy villagers. Our identification of Alişar IV with the Hittite Empire period was confirmed by an examination of Th. Makridi Bey's Boğaz Köy pottery in the İstanbul museum and by studies of the valuable publications of De Genouillac and Frankfort.[2] However, though a large part of the Alişar IV citadel had been uncovered, only some button seals ("bullae") with unintelligible hieroglyphic legends had been found. There was a possibility of finding written records in Stratum III; but the entire Alişar IV citadel would have to be removed before we could penetrate to the main Stratum III settlement. There remained Periods V, II, and I. The primitive character of Period I remains seemed to eliminate this stratum, though imported tablets might occur there.

[1] Later excavation of Plot L 14 is described in the chapter on Alişar I (pp. 33–40).

[2] Henri de Genouillac, *Céramique cappadocienne* (Paris, 1926); Henri Frankfort, *Studies in Early Pottery of the Near East* (London, 1924–27).

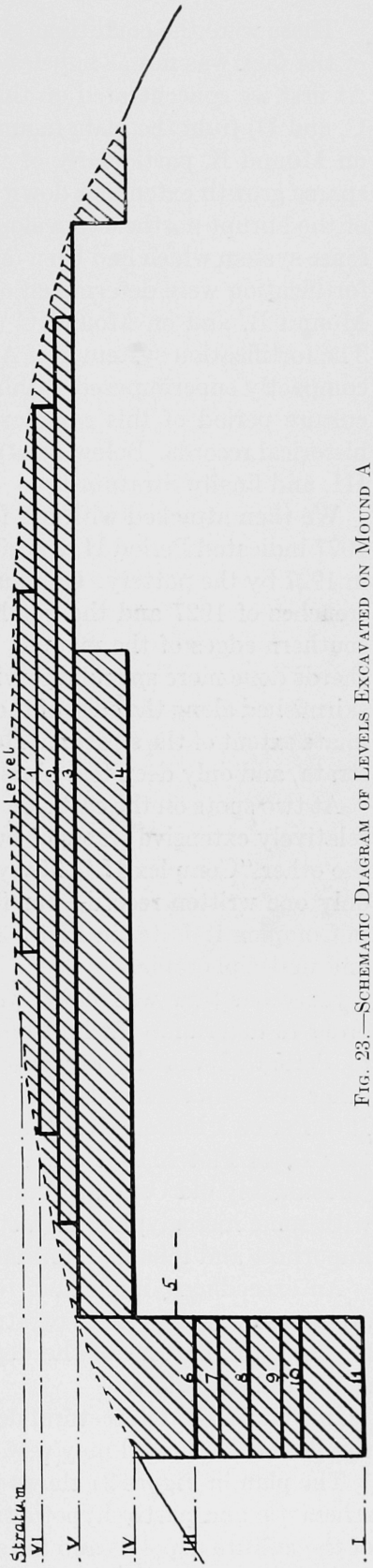

Fig. 23.—Schematic Diagram of Levels Excavated on Mound A

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These were the conditions given at the beginning of the third working-season. The solution of the task was not as hopeless as it first appeared, but our patience had to stand a hard test. At first we concentrated on that section of the mound which extends in three projections (B, C, and D) from the main mound (A) in order to determine the time relations of the structures on Mound B, particularly of the defense wall uncovered in 1927. We found that a strip of sparse growth extending down the slope of Mound A and fading into Mound D near the edge of the abrupt northeastern slope of the latter promontory covered the continuation of the defense system which had been uncovered on Mound B. The chronological relations of the whole fortification were determined on Mound D, in a test square (F 14) inside the defense wall on Mound B, and on Mound C (Plots F 8—G 8) where sections of buildings were uncovered. The fortification system is of Alişar V origin, and a series of at least three architectural levels, compactly superimposed within the walls, indicated its long use. Though we determined the culture period of this complex as Alişar V (post-Hittite and pre-Hellenistic), we found no historical records. Below Stratum V followed a thin deposit of Stratum IV, the thick Stratum III, and finally Stratum I.

We then attacked with full force that part of the mound terrace where our experiences of 1927 indicated Period II deposits ought to be. The Alişar II culture complex had been defined in 1927 by the pottery. Our clues for tracing Stratum II were the information obtained in the trenches of 1927 and the potsherds which cropped out on the surface along the eastern and southern edges of the mound. Never before in the experience of the writer have the humble sherds done more splendid service than in defining and tracing Stratum II at Alişar. The staff skirmished along the edge of the mound picking up pottery bits, and so determined the approximate extent of the stratum. However, toward the main mound Stratum II slipped below later strata, and only deep test plots could determine its presence or absence.

At two spots on the east side of the terrace tests expanded to excavations, and we uncovered relatively extensive tracts of buildings. We called the northern excavation "Complex I" and the other "Complex II." Many objects of great interest were found in these excavations, but only one written record—our first cuneiform tablet (b 1600), which appeared in Plot HH 9, in Complex I. Later in Plot J 33 we found a second tablet fragment (b 2700), badly abraded and undecipherable.

Since our time was short, we tested the remainder of the mound in individual squares in order to determine the horizontal and vertical extent of the strata. In Plot J 33, in addition to Period II vessels, we found some beautiful vessels of Period IV. Outstanding finds in other test plots were: Period VI (Roman) objects dated by coins (b 868 and b 869) in Plot R 6; Period I burials (b X6 and b X9–14) in Plot AA 16; an Egyptian scarab (b 611) in Stratum IV in Plot X 19; Period II mace heads (b 1102 and b 1103) in Plot Z 27; a Period VII (presumably old Osmanli) burial ground in Plot ZZ 31; and an interesting Period IV "bulla" with some hieroglyphic characters (b 2675) in Plot YY 26. The bulk of the objects and more important and reliable information were obtained in our more extensive excavations.

An exceedingly important test was pursued in Plots L 14–15, where we penetrated five architectural sublevels of Stratum I, reaching Level 11 (cf. Fig. 23), and had to stop without reaching the bottom of the deposit. This left open the question whether still older culture strata existed below.

In Plot M 13 architectural details left undecided in 1928 were clarified, and our theory that the Period IV citadel may rest on Period III fortifications was strengthened.

The plan in Figure 21 shows the extent of the excavation at the end of 1929. Figure 24 is a schematic and partly hypothetical cross-cut on a west-east line. It shows the relative depth of the culture deposits and the superpositions of various strata at given points. The diagram is

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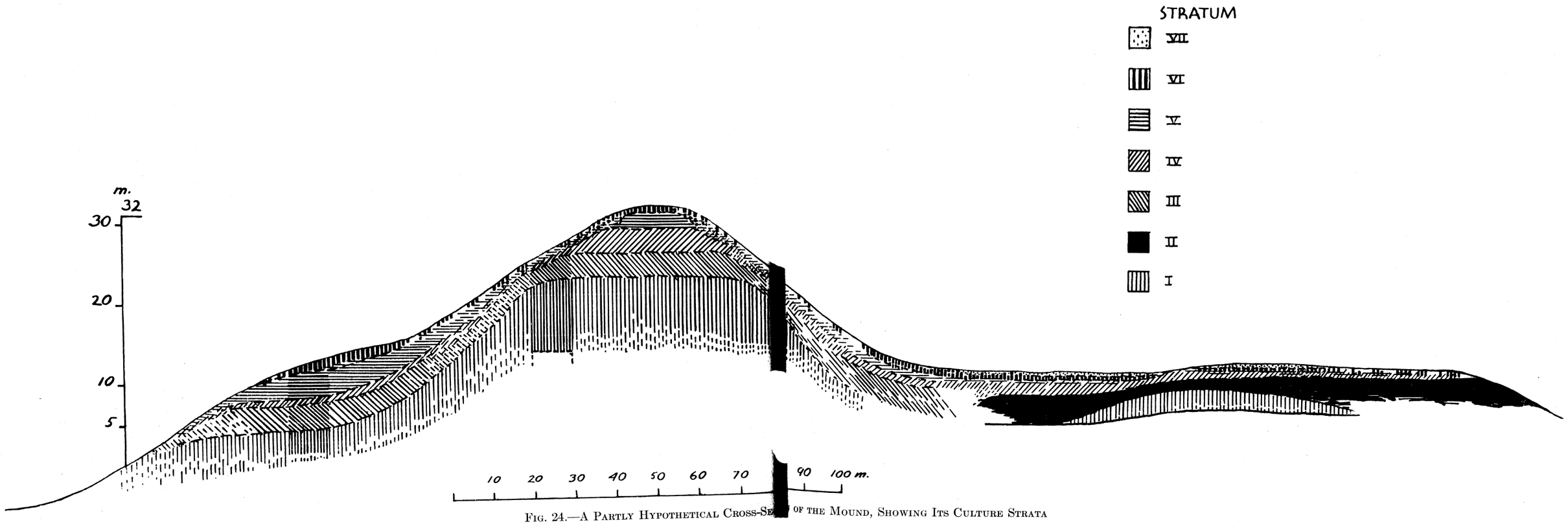

FIG. 24.—A PARTLY HYPOTHETICAL CROSS-SECTION OF THE MOUND, SHOWING ITS CULTURE STRATA

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based on information obtained in the extensive excavations on Mounds B and A, in the deep test Plots F 14 and L 14–15, in the trenches of 1927, and in the neighboring tracts and test squares of 1929 in the eastern part of the mound terrace.

"What is the coefficient of error in archeological work?" Dr. Franz Boas, professor of anthropology at Columbia University, asked the writer this question during examinations; and experience has considerably increased the range of answers. In spite of the most conscientious consideration of all factors, mistakes may occur. There are many forces at work to supply sources of error: the activities of the successive settlers, the climatic conditions, animals, and even plants.

Considering only the fundamental question of the chronological relations of the remains, confusion due to human activities may originate in many ways. New settlers occupy the mound, level off certain structural remains, use well preserved foundations of their predecessors, and thus inhabit the same floor level. On the mound slope they construct later buildings, terrace fashion, on the same level with those of earlier periods, as illustrated by the conditions in Levels 2 and 3 on Mound A.

We find refuse layers intermediate between strata and between occupational levels. Such refuse layers may contain objects from the levels below or above, as well as objects which are actually intermediate in time between the deposits of these levels. Objects of a type which is common in one of the levels and rare or absent in the other are, of course, more likely to belong to the level in which they occur frequently. The greater percentage of remains found in such layers belongs to the level above. This is in part the result of the age-old Anatolian custom, still practiced by the modern villagers, of digging storage or refuse pits into the underlying deposit.

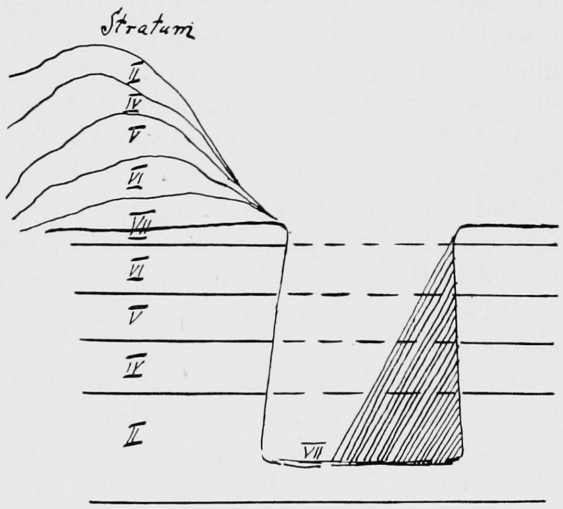

Fig. 25.—A Hypothetical Sketch of a Period VII Pit Reaching to Stratum II

On the other hand, specimens from the lower level may have been deposited in elevated spots. The digging of pits or the laying of foundations may disturb older refuse and mix it with the floor layer of the new residence. A deep storage pit dug during a late occupation reverses the entire sequence of culture refuse. Plot XIII[1] (1927) illustrates this point. There an Osmanli (Alişar VII) storage pit extended to a depth of 3.90 below the surface, well into Stratum II. A Roman (Alişar VI) pit in the same plot extended to almost the same depth. Frequently Period VI vessels and other objects appeared in Stratum II. Roman *terra sigillata* sherds sometimes occur in Stratum I. Figure 25 shows diagrammatically the possible sequence of remains around a Turkish pit. In case the pit was not started until after some Period VII refuse had accumulated, the process of digging would pile on top of it refuse from Period VI, then Period V, and so on to Period II, while just below, forming the wall of the pit, we would find successively Periods VI, V, etc.; the pit would then be filled with Period VII rubbish. An unfortunate archeologist might strike such a heap of dump-soil and not penetrate deep enough to find the normal series underneath. In practice, if he watches the soil, he will notice the dark refuse dirt and check his information elsewhere. Large-scale disturbances of this sort, however, may seriously affect his results.

[1] *OIP* VI 140 f.

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Later settlers may find and re-use earlier objects and (to a lesser extent) preserve heirlooms. All the remains of an earlier time which are admixed with the culture deposit of later settlers may mislead the excavator.

Climatic conditions furnish another source of error. Objects on exposed slopes of the mound will be washed downhill, and with the continuation of erosion earlier objects will follow and will be deposited on top of the later remains.

The activities of rodents and other animals burrowing through the culture deposits may bring about strange associations of objects. To a lesser extent this is true of the slower action of roots also.

No material remains can subdivide culture phases as delicately as can written records. But where datable objects are lacking, other specimens are used as "guide fossils" for determining as closely as possible the time relations of the culture strata and their subdivisions.

Enough has been said about the outstanding value of pottery as a guide. Usually no reliable chronology of culture deposits can be established without its aid. (This statement concerns post-paleolithic sites, of course.) After the relative positions of all pottery types within a given deposit have been determined, secondary guide fossils are defined by their constant association with the same pottery type. Success in determining such guides depends on the volume of a deposit, on the frequency of characteristic objects in the stratum, and on the extent of the operations. For instance, because of the limited excavation of Stratum III, only two types of guide fossils could be determined: pottery and spindle whorls. There is little doubt that more objects exist which are typical for that period.

Aside from pottery, objects suitable for chronological guides are, first of all, the humble spindle whorls, which are frequent and characteristic in Stratum I, Stratum III, and Stratum V, and consequently furnish negative criteria for the others. Next follow metal objects, falling into certain large phases—chalcolithic, bronze, and iron—which overlap one another and persist to the present day. Thus the appearance of a new metal or alloy serves to define an archeological period. The objects themselves with their variations in form give more delicate chronological clues.

Bone objects, though relatively frequent at Alişar, are of limited use as guide specimens. Certain frequent and characteristic objects qualify as chronological guides in Stratum I and in Stratum II, but the bone specimens in the other strata are less useful. The osseous remains of animals may furnish important clues when they have been studied. When we have more accurate knowledge of the human skulls and of the burial methods, they may serve to indicate the period of disposal.[1]

Seals sometimes serve as chronological clues. Cylinder seals, for example, have been found at Alişar in Stratum II only; "bullae" with hieroglyphic legends, in Stratum IV only. When the glass beads have been studied by an expert, these specimens will be of great value, though such small objects easily migrate within the deposit. Only a few varieties of stone specimens are suitable guides. Certain types persist to the latest periods; others occur during several culture periods.

With the lack of superstructures the architecture at the Alişar mound is of little or no use for determining the time relations of the respective layers. As a matter of fact, the structures were always dated by the objects associated with them.

Undoubtedly, with the progress of work in Anatolia and with the determination of a greater number of guide fossils, the culture strata and their subdivisions will be more accurately defined.

[1] In the same manner as the long skulls and the broad deformed skulls of the American Southwest.

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III

THE CULTURE PERIODS

We have now distinguished seven culture strata at the Alişar mound (cf. diagram, Fig. 24). In this volume Stratum I and Stratum II are numbered as in *OIP* VI. The former Stratum III is now divided into Stratum III, Stratum IV, and Stratum V. Stratum VI contains Hellenistic, Roman, and Byzantine remains. Stratum VII covers the Seljuk and Osmanli phases of the mound's history. Stratum VI and Stratum VII illustrate the fact that several epochs distinctly separated by historians may be included in a single one of our present archeological units.

Such a discrepancy may arise from the fact that history is made up largely of political events and that political events (particularly the more ephemeral ones) affect culture mainly in the political center and do not cause a general culture change. During certain periods a site may be near the political center of an area; at such times conquest by a new power will probably force a new culture on this central area which is directly exposed to the influence of the invaders. At another period, however, the same site may be an unimportant outpost far from the political center. New rulers, having but loose control of such a settlement, cannot force their whole culture upon the people. Only certain elements of the new culture will be passed along to a distant settlement; some few of these may be adopted, the rest rejected. Thus at such a site there would be little archeological evidence of distant political changes. Historical periods which have left few archeological traces at a given site can be illumined only by excavations of other sites which were close to the political and cultural center during those periods.

Furthermore, the archeological work at a mound deals first with rather large units, i.e., culture phases, and subdivides them later into smaller units which reflect less easily traceable events. The Alişar mound is so large that it will require many more working-seasons to obtain even relatively full information.

Figure 26 shows the Alişar culture periods in terms of time and of space. Of course, both series represent only our present state of knowledge, and there is no doubt that the divisions of the time scale at least will be considerably modified. The diagram showing the depth of the strata is based primarily on the situation in the main mound (A). The .20 layer at the top represents the average thickness of the mound crust. The depth of Stratum VII, which was absent from the main mound, was supplied from excavations on the terrace. For Stratum V the average thickness on Mounds A, B, and C was taken. Stratum II was found on the terrace only. Because of its unique position, it has been drawn separately on both diagrams.

The earliest stratum we have definitely determined in the mound,[1] Alişar I, contains material of an apparently indigenous Anatolian culture characterized by plain, handmade, red-slipped pottery. According to our estimate, Period I lasted from about 3500 to 2500 B.C.

Stratum II is the best defined deposit at the mound. It accumulated during the occupation of the site by a group of people of a different racial type[2] and with an utterly foreign culture far superior to that of the indigenes. This high culture is characterized by wheelmade pottery in a variety of pleasing forms. From this stratum came our two cuneiform tablets also. On the mound terrace Stratum II had been deposited upon Period I remains. In the mound itself, however, Stratum II was not to be found. There Stratum III came directly above Stratum I.

[1] I.e., at the end of 1929.

[2] A chapter on racial types will be included in *OIP* XX. Cf. p. 72, n. 1.

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Because of this peculiar situation it is difficult to determine the time relations of Periods I, II, and III. Though we are fairly certain that Period II is partly contemporaneous with Period III, we cannot determine accurately when it began or when it ended; and its position on the time scale (cf. Fig. 26) may have to be altered. The end of Alişar II came abruptly.

On the main mound Alişar III follows Alişar I. The appearance of a totally different type of spindle whorl and of painted pottery marks the change from Period I to Period III. Though Period III represents a new culture phase, there is evidence of a fairly gradual transition from Period I: certain Period I features of pottery technique and form persist in Period III. With the plain Stratum I ware a few primitively decorated sherds were found in the uppermost

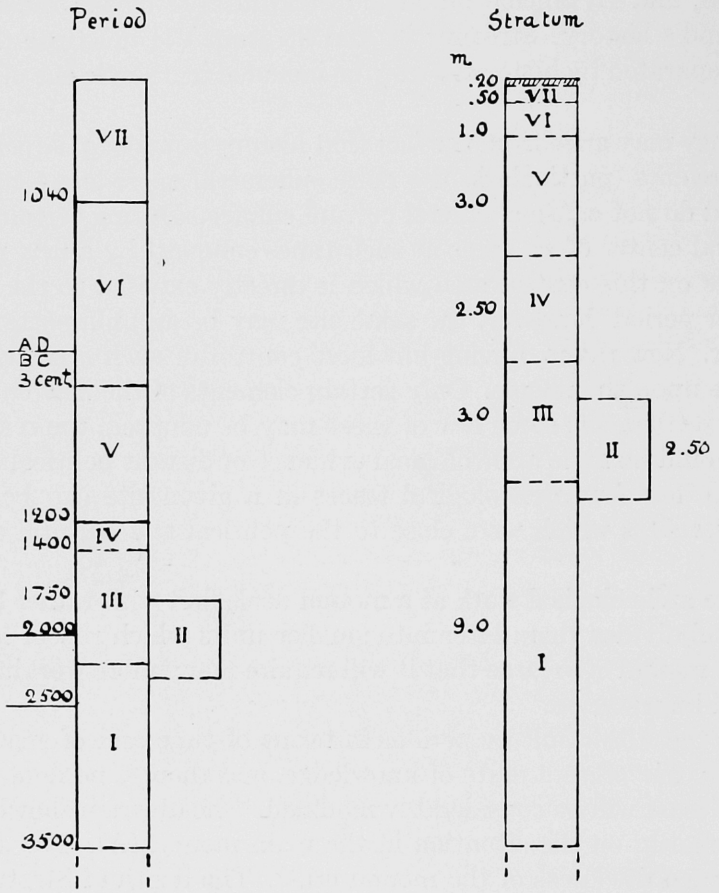

Fig. 26.—Correlation of the Culture Periods with the Mound Strata

levels. A transitional layer between Stratum I and Stratum III contains a previously unknown type of painted pottery (early Alişar III), less elaborate than the characteristic Period III ware (cf. p. 21).

Alişar IV is the period of the expansion of the Hittite Empire. The royal court of Ḫattushash was in close contact with the other great nations of this time; soldiers, merchants, architects, artists, and scholars were the tools of culture diffusion. The use of the potter's wheel was well established, and Period IV pottery was carefully made and beautifully decorated. Iron appears for the first time in Stratum IV, as does the so-called "Hittite hieroglyphic." The end of Alişar IV was presumably caused by the catastrophic collapse of the Hittite Empire as the result of foreign invasion. Certain features of the culture persisted, and scattered bands of the people survived for some time; but the culture as a whole was destroyed in Anatolia.

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Alişar V is not clearly defined.[1] For a considerable time after the fall of the Alişar IV citadel the site seems to have been inhabited sporadically only. We have not yet been able to trace the activities of the Phrygians and Assyrians, Cimmerians and Treres, Scythians, Lydians, and Medo-Persians. Stratum V is characterized by pottery decorated with simple bands; but we found also pottery with elaborate sphinx patterns and bird designs, plain vessels of pleasing form, and others with simple relief ornamentation. The latter type persists into Period VI. During the latest phase of Period V intrusive objects from the Aegean appear. Alişar V seems to fade into the first phase of Alişar VI.

In Alişar VI we have not yet been able to separate definitely the Hellenistic, Roman, and Byzantine layers. Here we have a peculiar situation. We have succeeded in defining archeologically the short and historically vague Alişar II and Alişar IV periods, because the material remains of those strata are distinctive and contrast with the preceding and succeeding remains; but in Alişar VI we have had to resign ourselves to dealing with several well known historical periods as one archeological unit. According to find-spots, we can define certain objects as intermediate between Alişar V and the Roman phase and can tentatively call them Hellenistic, but such a designation is uncertain until a compact layer with dated material has been identified. A few coins of this period verify certain find-data. The Roman period is characterized by the technically most advanced pottery represented at the mound—the bright red *terra sigillata* with its extremely fine paste—and by other "fine wares." The change from the Hellenistic to the Roman phase seems to have been started by the infiltration of elements of Roman culture, aided presumably by the pro-Roman attitude of the Cappadocian princes. But the bulk of the Roman material originates from the period of actual occupation, following A.D. 17. With the separation of the Eastern Empire the Byzantine period supplanted the Roman. So far we have found only a few coins, some glazed potsherds, and a re-used tombstone to represent the Byzantine phase.

Probably the devastations of the Seljuks brought Period VI to an end, though it is possible that earlier invasions were responsible. The battle of Manzikert in A.D. 1071 ended the Byzantine phase and began the period of Seljuk domination (Alişar VII) in the Alişar district. We found few Seljuk remains; only a few coins and some glazed sherds with greenish blue and iridescent shades indicated their occupation of the site. The Seljuk phase was wiped out by a Mongol invasion which cleared the road for the rise of the culturally and racially related Osmanli with whom the last phase of the mound's life began.

Our generation has observed the end of the Osmanli phase. It is an illustration of a rapid change in culture brought about by new rulers. We have seen the fall of the ruling dynasty of Turkey and the transfer of the political center from İstanbul to Ankara. A president with dictatorial power, Gazi Mustafa Kemal Paşa, replaced the sultan. The new capital expanded; buildings combining oriental and occidental features rose within a short time. European architects, railroad-builders, and experts in agriculture, forestry, hygiene, physical sciences, and the like were called in to co-operate with the native experts in reforming the whole culture complex. The native dress was abolished. Arabic script was replaced by occidental characters. There is almost no feature of life in modern Turkey which has not been affected by the reforming activities of Kemal Paşa and his loyal and able followers.

We may assume that this process parallels, to a certain extent, the activities of the Hittite kings at Ḫattushash. Then, as now, cultural elements were elaborated, modified, or changed by the will of a small ruling group headed by one man, stimulated by foreign influences, and supported by foreign experts.

[1] Our report of the excavation of Stratum V, Stratum VI, and Stratum VII will appear in *OIP* XX.

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IV

STRATUM I

The history of Anatolia during the culture period represented by Stratum I at Alişar is still a sealed book for us. Though Egypt and Babylonia had already developed advanced systems of writing, our knowledge of that period in Asia Minor depends entirely upon archeological researches. A homogeneous and, to judge by the uniformity of the material remains in the extraordinarily deep Stratum I, rather stagnant culture persisted in Anatolia for many centuries, although the change from the Chalcolithic to the Bronze Age may have taken place during that time.[1]

This dark age is illumined by few records of foreign contacts. Three fragments of an epic, "The King of Battle"—one, "in the most unmistakable Anatolian (Hittite) orthography" but in the Akkadian language, found at Tell el-Amarna in Egypt; another, in normal Assyrian, found at Assur; and a third, in the Hittite language, from Boğaz Köy—show how widespread was the legend of a campaign by Sargon of Akkad (about 27th century B.C.) against the city of Buršaḫanda in Asia Minor.[2]

Sargon's successor, Naramsin, is mentioned in an Akkadian tablet fragment[3] as having defeated a coalition of seventeen kings, among them the king of Burušḫanda. A Hittite tablet from Boğaz Köy mentions Naramsin's conquest of another group of seventeen kings, among them the rulers of at least three Anatolian areas: Ḫatti, Kaneš, and Kuršaura.[4] Now Buršaḫanda of the Sargon epic (Burušḫanda in the Boğaz Köy fragment) is evidently the same as Naramsin's Burušḫanda. The latter designation, found also in early Boğaz Köy texts other than that of the Sargon legend,[5] is probably the same as Burušḫatum of the Cappadocian tablets,[6] which is often named in close association with Kaneš. The latter site has been identified by Hrozný[7] with the mound of Kül Tepe northeast of Kayseri, only about 160 kilometers by road from the Alişar mound.[8]

During the later Gutium dynasty commercial relations existed between Babylonia and southern Asia Minor. Gold dust, for instance, was obtained by Gudea of Lagaš from Ḫaḫu, a mountain southwest of Kaneš.[9]

We learn from the foregoing records that, although the culture of Alişar I was apparently homogeneous, Anatolia was subdivided into separate political units under the rule of princes who at times combined into coalitions against a common foe. Alişar I began perhaps as early as 3500 B.C. Its termination is dated in the second half of the third millennium B.C. by the

[1] See pp. 29f.

[2] See W. F. Albright, "The Epic of the King of Battle," *JSOR* VII (1923) 1–20, where references to the first two sources and to previously published discussions are given. His p. 6, n. 5, should refer to *MDOG* No. 55, pp. 39–45 also, where good photographs of the Tell el-Amarna fragment are reproduced. The third (Hittite) fragment is transliterated in *Die Boghazköi-Texte in Umschrift* II (1922) No. 1.

[3] British Museum, *Cuneiform Texts* XIII, Plate 44.

[4] See B. Hrozný, "Narâm-Sin et ses ennemis d'après un texte hittite," *Archiv or.* I (1929) 65–76.

[5] E.g., *Boghazköi-Texte in Umschrift* II (1922) No. 7, lines 74 and 77.

[6] Cf. G. Contenau, *Trente tablettes cappadociennes* (1919) p. 26.

[7] "Rapport préliminaire sur les fouilles tchécoslovaques du Kultépé," *Syria* VIII (1927) 1–12, esp. p. 10.

[8] We found at Kül Tepe a good-sized stratum corresponding to Alişar I, and chalices identical with our Nos. b 139 and b 37 were offered for sale in the adjoining village.

[9] Sidney Smith, *Early History of Assyria* (London, 1928) p. 99.

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apparent parallelism of its final phase with the early part of Alişar II.[1] According to this estimate, Alişar I was contemporary with both Troy I and Troy II[2] and also with the three Early Minoan periods of Crete.[3] The early phase of Alişar I seems to have been synchronous with the Chalcolithic painted pottery age in the Euphrates-Tigris region[4] and with the high civilizations from Sumerian times to the 1st dynasty of Babylon.[5] In Egypt the age of the pyramid-builders of the Old Kingdom and the dark centuries that followed fall into the period of Alişar I.

Although the red pottery age proper had ended in Cappadocia by 2000 B.C., it probably persisted in marginal regions—a phenomenon well known to students of anthropology and pertaining also to other culture features. In Troy II, for instance, which corresponds most closely to Alişar I, Egyptian 12th dynasty beads were found which have led Frankfort to attribute the fall of Troy II to the 19th century B.C.[6] However, the very fact that the potter's wheel appeared during Troy II implies that that settlement lasted considerably longer than Alişar I, which ended at about the time when the wheel was imported by the Alişar II people. No wheelmade vessels were found in Stratum I; hence the advanced form of red ware found from Troy to Boğaz Köy was absent from Alişar. A different kind of advanced red ware occurred in Alişar II.

Though a culture corresponding to that of Alişar I apparently lasted longer in the marginal region on the western coast of Asia Minor, its early phase in the interior of the peninsula (e.g., at Alişar) certainly preceded Troy II and was therefore contemporaneous with Troy I. This may explain the occurrence in Troy I of certain "red vessels with beautiful luster"[7] which Frankfort considers accidental products.[8] May they not have been forerunners of that type of Troy II pottery, imported from the east or at least influenced by the technique then prevalent in the interior of the peninsula?

According to Sidney Smith, copper was probably imported from Cilicia into southern Mesopotamia between 3000 and 2600 B.C.,[9] and there may have been a trade route from Asia Minor through Cilicia and North Syria to and down the Euphrates.[10] He states that at the end of the third millennium Cappadocia was a center of copper-working.[11] According to Sayce, "the copper, lead, and silver mines of the Taurus were worked by Babylonian firms whose agents made Kaneš their residence."[12] However this may be, our only present hope for dating Alişar I more accurately lies in the finding of datable imports or exports interchanged between early Anatolia and other regions.

Perhaps bronze was introduced at Alişar during Period I, although no definite break was noticed in general culture. We have only the simple fact that one pin, taken from the chest of a Period I skeleton, X3 in Plot IX of 1927[13] (in CC 13, Fig. 21), contained 89.4 per cent copper and 10.6 per cent tin, i.e., it was of bronze.[14] Six other pins from various spots in

[1] [But cf. p. viii, n. 1.—EDITOR.]

[2] I, 3000–2500, and II, 2500–2000, according to W. Dörpfeld, *Troja und Ilion* I (Athen, 1902) 31.

[3] EM I, 3400–2800; EM II, 2800–2400; EM III, 2400–2100; see Sir Arthur Evans, *The Palace of Minos* I (London, 1921) 70, 102, and 126.

[4] 3500–3000 according to S. Smith, *op. cit.* p. 6.

[5] Cf. A. T. Olmstead, *A History of Assyria* (New York and London, 1923) chap. iii; L. W. King, *History of Sumer and Akkad* (New York); R. W. Rogers, *History of Babylonia and Assyria*, 6th ed., II (New York, 1915) chaps. i–iii.

[6] *Studies in Early Pottery of the Near East* II (London, 1927) 152, n. 2.

[7] Hubert Schmidt in Dörpfeld, *op. cit.* p. 246.

[8] Frankfort, *op. cit.* p. 64.

[9] *Early History of Assyria*, p. 49.

[10] *Ibid.* p. 53.

[11] *Ibid.* p. 57.

[12] *The Hittites*, 4th ed. (London, 1925) p. 211.

[13] See *OIP* VII 4–5.

[14] This analysis was made by Dr. Walter Goebel of the Rockefeller Institute, New York.

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Stratum I all showed less than 4 per cent tin, an amount which might easily be accidentally admixed.[1]

From the material remains preserved in Stratum I we gain the impression of a rather primitive agricultural and pastoral people.[2] Wheat, of which we found charred remains, was ground with the aid of hand grinders on simple hand mills whose form, persisting through the period of the Hittite Empire,[3] is identical with that of primitive stone mills found in other regions far away, e.g., the *metates* and *manos* of the American Southwest. Houses were built of unwrought stones or *kerpich* (sun-dried bricks); as a rule the *kerpich* walls had stone foundations. No fabrics have been preserved; but spindle whorls found in great numbers, loom weights, and particularly some highly conventionalized stone figurines indicate that sheep were raised and their wool made into garments. As to the form of the latter, our only clues are copper or bronze garment pins. These, found consistently on the chests or near the shoulders of the skeletons, indicate where the vanished garments were held together. It is possible, of course, that only mortuary robes were thus fastened. Neither cart wheel nor potter's wheel was known in Central Anatolia until the wheel in general was imported by the people of Alişar II.

Except for some figurines, ornamented whorls, copper and bronze bracelets, and primitive attempts at pottery decoration, one cannot speak of any "art" during this period. The bulk of the material recovered to date is purely utilitarian. Some stone and copper or bronze stamp seals bearing simple geometric patterns are the forerunners of the elaborate seals of later times. Crude little figurines of stone and pottery, which may have been idols or charms, give us only a hint as to the religious beliefs of the Early Anatolians.

There seems to have been no ancestor worship; at least the dead received no special care. When looking at the heavy stone slabs which closed the burial urns of Alişar I, or when noticing that an individual has been literally stuffed into his urn head first, we think of the Tarahumara medicine man of northern Mexico, who implores the departed soul to stay where he is and not to annoy the living. Except for garment pins and in some cases ear pendants, the dead were left without equipment. No weapons or utensils accompanied them—a deplorable fact. In other regions of the earth, and during various periods, objects of the highest aesthetic and historical value were buried with the dead, giving us information otherwise unobtainable.

THE SETTLEMENT

Remains of Stratum I were found over about half the area of the mound (Fig. 27). The peculiar hiatus within the Alişar I deposit was proved by the occurrence of Alişar II remains at the very bottom of the culture deposit in the plots excavated at this point (Plots XIV and XV,[4] in W–Y 14–15, Fig. 27). In addition, an extraordinarily deep layer of Stratum III and

[1] One pin, analyzed by Mr. Kenneth N. Campbell under the direction of Mr. W. E. Vaughn, contained 94.44 per cent copper and 0.49 per cent tin; a faint trace of lead was determined electrolytically. The other five were analyzed in the chemical laboratory of the University of Chicago by Mr. E. L. Haenisch under the direction of Dr. Julius Stieglitz. No other objects of Stratum I have been analyzed.

[2] The animal bones found in the successive strata of the mound were carefully recorded, but have not yet been worked up. Important results as to the first appearance of certain types of domesticated animals and changes within the series may be expected.

[3] Certain types of objects remained the same from Stratum I through Stratum IV throughout the mound. Among these are spindle-shaped points of copper or bronze; stone hand mills, celts, polishing-stones, and polished stones; bone spindles and knucklebones for games. The stone door sockets seem slightly better selected in the earlier periods, but the forms of one period cannot be distinguished from those of another. The general style of wall construction remained the same: more or less rough stone walls and *kerpich* brick walls with or without stone foundations. There is always a variety of spindle whorls. Some whorl shapes are found in all the strata, others in only one or two. First one shape, then another, is most common and becomes a "guide fossil" for its period. Plain clay rings appear in all strata.

[4] These and other similar plot numbers are the designations used in *OIP* VI. They are indexed on its p. 283. Cf. our Fig. 377.

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later remains was found near the western edge of the hiatus (Plot XXIX, in T 13, Fig. 27). The excavations of 1927–29 did not progress far enough to determine the course of Stratum I south of the main mound (A).

Almost everywhere Stratum I was deeper than any one of the superimposed strata, and in most locations it was deeper than all the others taken together. This fact was particularly well demonstrated in the stratigraphic test plot adjoining Plot X in BB 13–14 (Fig. 21),[1] where this early deposit was twice as deep as all the later accumulations. In Plots AA 15–16 a thick layer of Period I remains was covered by about 1.50[2] of later deposits. The thickness and depth of Alişar I deposits as determined in the test plots vary according to their distance from the

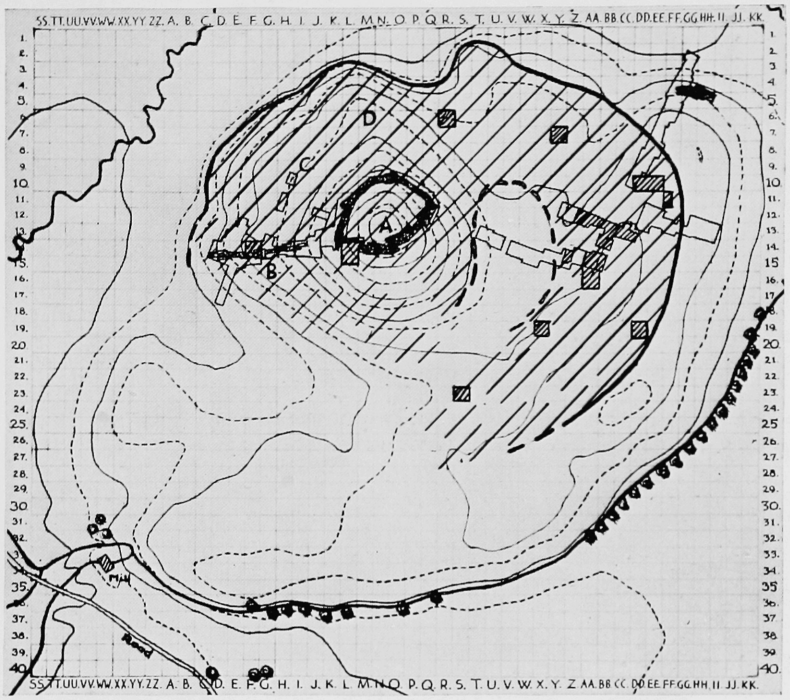

Fig. 27.—Settlement Plan of Alişar I

nucleus of Mound A and the thickness of the later strata. In Plots L 14–15 on the main mound we excavated Stratum I to a depth of 9 meters below the floor of the superimposed Stratum III without reaching the bottom of the deposit. The total height of all the later strata (III–VI), accumulated from the end of the third millennium B.C. until the beginning of our era, was also 9 meters. The later strata are far less voluminous, although some at least of their structures (e.g., the Hittite Empire citadel) were built with much stronger, less readily collapsing walls. This fact greatly influenced our tentative dating of Alişar I as lasting more than twelve centuries.

On the other hand, we must remember elements which lead to uncertainty. There may be sterile layers between different strata or even between occupational levels of the same stratum. Such sterile layers would accumulate very slowly over deserted areas. We found, for instance, that the sterile shell which had formed above remains dating from the early part of our era (i.e., about 1,500 years ago) was only some .25–.30 thick! Furthermore, successive settlements of even the same period were not always directly superimposed. The levels of a single stratum would grow at an uneven rate.

[1] See *OIP* VI 214 ff.

[2] All measurements are in terms of meters and fractions of meters.

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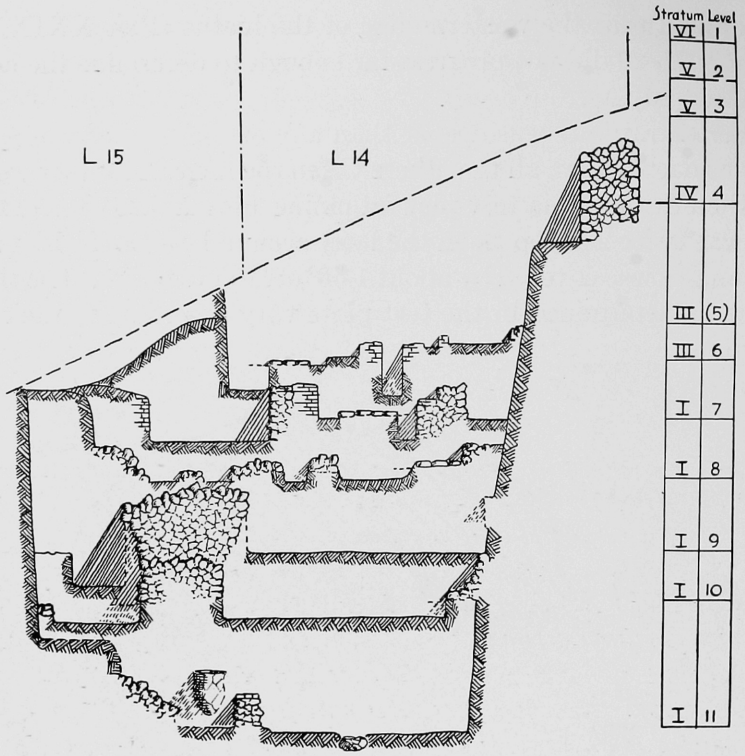

FIG. 28.—CROSS-SECTION OF PLOTS L 14–15, SHOWING SUPERIMPOSED STRUCTURES OF PERIODS I, III, AND IV, WITH THE RELATIVE POSITIONS OF THE PERIOD V AND VI LEVELS INDICATED. SCALE, 1:200

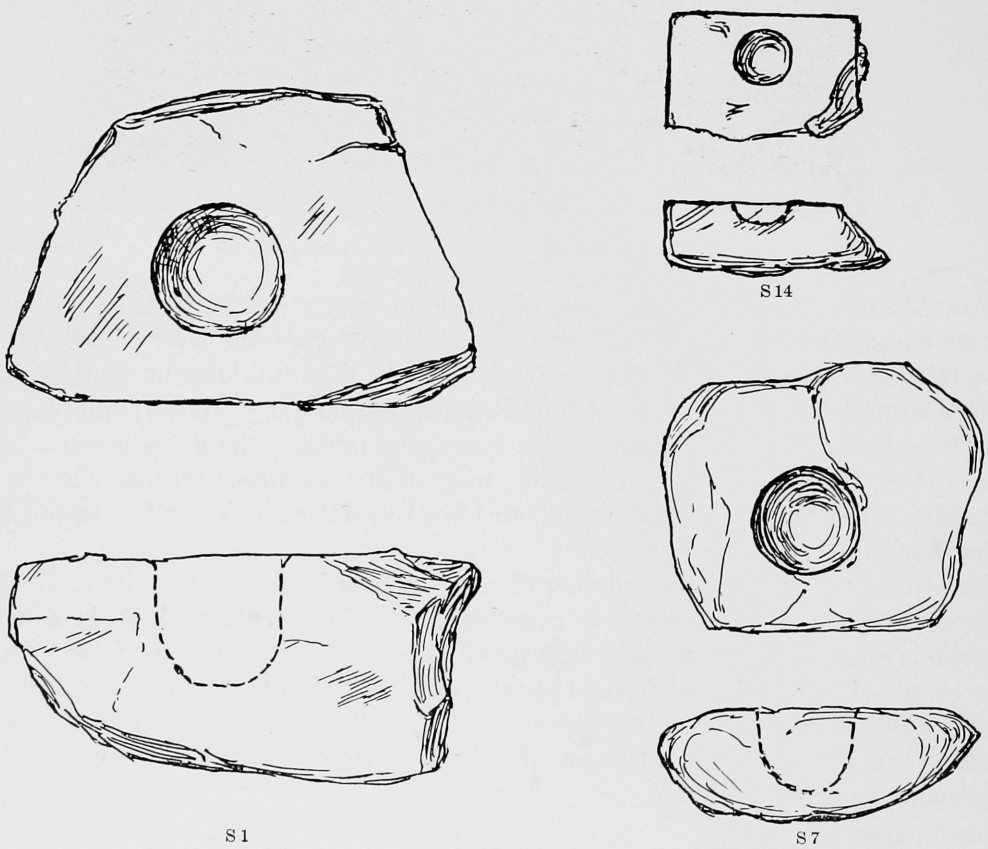

FIG. 29.—DOOR SOCKETS. SCALE, ABOUT 1:8

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The fact that we had not yet struck the base of the central deposit left open the question whether Alişar I is actually the earliest stratum. This site which was so consistently favored by settlers throughout all the principal culture periods of central Asia Minor may have had a Neolithic settlement also.[1]

Our most important information about Period I was obtained in Plots L 14–15. The excavation of the upper levels in these plots has been described on pages 20–21. At Level 7 (cf. Fig. 23) the top of the Alişar I deposit was reached. We continued downward through four more occupational levels without striking the mound base, while red-slipped handmade pottery of Period I prevailed undisputed as the guide ware. Other plots giving important results were AA 16 and the adjoining Plot XVIII of 1927 (in AA 15, Fig. 21), where four urn burials and a fifth without an urn were uncovered.[2]

Fig. 30.—Relative Positions of Level 7 and the Alişar IV Citadel Wall Above

ARCHITECTURE

As explained in chapter ii, we were able to uncover only sections of buildings in Stratum I. Therefore we have no ground plans of complete architectural units, to say nothing of the exact contours of the successive settlements.

PLOTS L 14–15

Nearly all our information concerning Alişar I architecture was obtained in Plots L 14–15, where five successive levels were uncovered (Fig. 28). The buildings in all the levels of Stratum I extended in general northwest-southeast. As in all strata, the walls were of *kerpich*, of stone, or of *kerpich* on stone foundations. Door sockets were flat slabs of building stone, sometimes marble, usually unwrought. The socket depressions were deepened and polished by use. If there is any difference at all between the door sockets of Alişar I and of the later strata, it is that the earliest were better selected than the later ones (cf. p. 30, n. 3). The three door sockets illustrated are all of marble (Fig. 29). Only No. 14 was wrought into a rectangle, although the upper faces of all seem to have been straightened artificially.

[1] [See p. viii, n. 1.—Editor.]

[2] See *OIP* VII 17–21.

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Level 7

Pottery was our faithful guide in determining this, the uppermost of the Period I levels (Fig. 30). In the refuse layer between Stratum I and Stratum III a few Period II sherds were mixed with early Period III and late Period I remains; but in the refuse that filled the rooms of Level 7 only a few stray sherds of Period III were found among the hundreds of red-slipped, handmade sherds characteristic of Period I. At an average the floor of Level 7 was about 1.50 below the superimposed early Alişar III level.

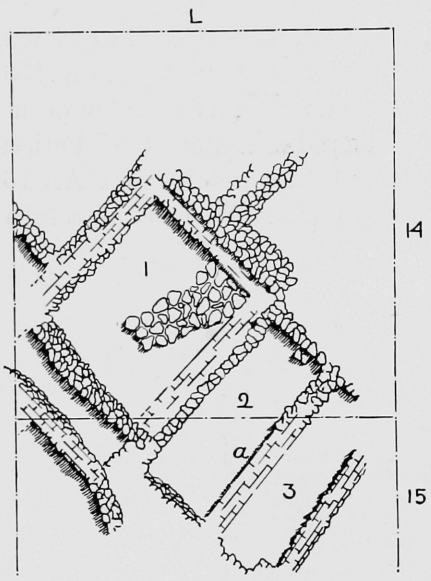

Fig. 31.—Plan of Level 7. Scale, 1:200

Room 1 (Figs. 31 and 32) was paved with flat stone slabs and inclosed by three *kerpich* walls on stone foundations and one all-stone wall. The stone walls at this level were rather badly built. Although the builders knew enough to use larger stones for the lower courses, the faces were uneven, due mainly to careless setting but in part to the influence of time. The *kerpich* walls were built as shown in Figure 33. Their stone foundations were extremely broad up to the level of the pavement; above it the inner half of the wall was of *kerpich*,[1] while the outer half was of stone. The latter, however, may have extended only a short distance above the lower *kerpich* courses to form a protective

Fig. 32.—Room 1 of Level 7

outer face. In addition to these walls, there was a third type of construction in the same building, for *kerpich* Wall 2*a* (Fig. 31) had no stone foundation at all. Since these wall styles are

[1] The bricks were light yellowish brown, or gray. Specimens measured were .48×.31×.09 and .40×.33×.08.

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typical of most Alişar strata, they cannot be used for dating. A doorway was suggested by a lower place in the wall in the east corner of Room 1. No traces of fireplaces were found.

Level 8

Crudely constructed and insignificant-looking house remains appeared in Level 8, the floor of which was about 1.50 below that of Level 7. The general arrangement of rooms and passages (Fig. 34) resembled that of Level 7. The rooms, however, were considerably smaller, and the walls were weaker and less skilfully constructed. The wall stones were not well fitted, and little or no mud was found as mortar. On Wall 1*a* a single course of large slabs was preserved; they may have formed a foundation for smaller stones. In Room 2 a platform, paved irregularly

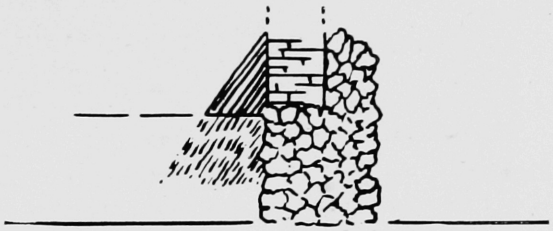

Fig. 33.—Cross-Section of a Wall on Level 7

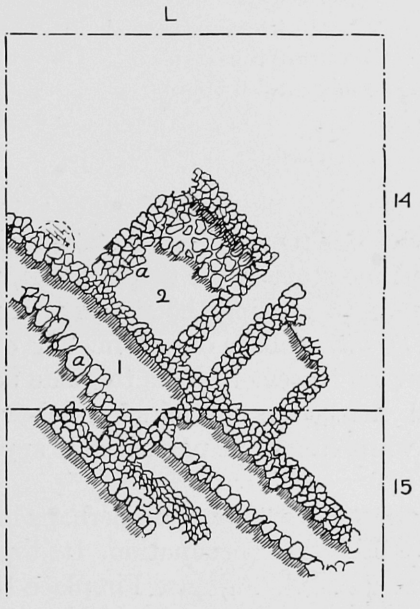

Fig. 34.—Plan of Level 8. Scale, 1:200

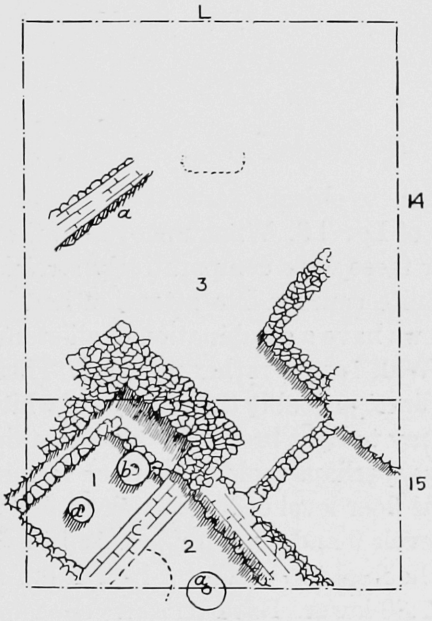

Fig. 35.—Plan of Level 9. Scale, 1:200

with stone slabs, was raised about .50 above a well marked floor. Fragments of crude vessels were scattered about on the pavement. The site of a fireplace was suggested by the blackened stones of Wall 2*a*.

Level 9

The main Alişar I settlement was apparently on Level 9 (Fig. 35). Although its walls had suffered from time and weather, they were stronger and, as a rule, better built than those in Level 8. Here again we regretted that we had not been able to continue the sectioning of the main mound started in 1928. Numerous specimens were obtained in the relatively small area under investigation. The fertility of the layer continued into Level 10. Below are listed the objects which were definitely associated with Level 9:

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Pottery
- 4 vessels
- 1 bead?
- 3 ornamented balls
- 2 unidentified objects

Whorls
- 13 ornamented pottery
- 3 plain pottery
- 20 ornamented stone
- 18 plain stone

Figurines
- 7 stone in human or animal form
- 2 pottery idols?

Seals
- 3 copper or bronze stamps
- 1 stone stamp

Copper or bronze objects
- 33 pins
- 4 arrowheads
- 2 points (arrowheads?)
- 4 rings
- 2 wires
- 2 unidentified objects

Stone objects
- 5 mace head fragments
- 2 hammers
- 1 ax fragment
- 2 pestles
- 1 celt
- 4 chalcedony knives
- 2 obsidian knives
- 1 perforated flake
- 3 polishing-stones
- 32 small polished stones
- 5 small polished hematite objects
- 1 ring
- 1 quartz crystal

Bone objects
- 3 awls, common type
- 1 awl with perforated point
- 2 shuttles?
- 3 polished spatulate flakes
- 1 horn with spatulate end
- 2 polished tubes
- 3 unidentified objects

Shell object
- 1 pendant

Many of these objects were taken from Room 1 (Fig. 35), the floor of which was about 1.80 below that of Level 8. When uncovered, the walls of this room still stood 2.25 high (Fig. 36). Their inner faces were comparatively straight, and the stones were carefully set, though not laid in definite courses. No attention had been paid to grading the stones toward the top. Here again we have a combination of all-stone and *kerpich* walls in one room. The construction of *kerpich* Wall 1*c* was rather puzzling. There were no traces of bricks to guide us; only two thin white lines, probably the remains of whitewash, marked its contours from above. Its color was light gray to light brown, with some stains of white limestone particles. It appeared to be a solid mass, perhaps molded between forms.

Below the floor level of Room 1 we struck the corner of an older room perhaps intermediate between Levels 9 and 10. Fireplace 1*a* belonged to this earlier occupation. Its top was about .60 below the final top of a later hearth (1*b*). We say "final," because Fireplace 1*b* was originally about .30 lower. Hard-burned yellow- and red-brown layers had accumulated, one on top of another, apparently keeping pace with the rising floor. On top were ashes, charcoal, and pottery fragments.

The most interesting architectural find was a circular construction (2*a*) of *kerpich*-like material (Fig. 37). Its top was carefully plastered and smoothed. It was made with a well modeled raised periphery and an elevated rim around the slightly oval depression in the center. The latter was somewhat blackened, but not enough to suggest utilitarian use as a fireplace. It had rather the appearance of an altar. A floor was indicated about .10 below its top.

On Wall 3*a* (cf. Fig. 35) extremely faint horizontal brick-marks were noticed, indicating the use of individual bricks laid dry (cf. Wall 1*c*). On top of Wall 3*a* traces of architectural remains intermediate between Levels 9 and 8 occurred. A layer of stone slabs was intermingled with some charred wood fragments and lumps of burned *kerpich*. This wall extended to a pit filled with burned matter. Apparently a conflagration had taken place shortly after the end of the Level 9 occupation; it may have terminated the phase of Period I which lasted during the occupations of Levels 9 and 10.

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FIG. 36.—STRUCTURES OF LEVEL 9 FROM THE NORTHEAST, SEEN FROM THE PERIOD IV WALL ABOVE

FIG. 37.—"ALTAR" ON LEVEL 9

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Level 10

Parts of structures of Level 9 had been directly superimposed on walls of Level 10. No complete rooms were uncovered at the latter level (Fig. 38). The walls were badly preserved, partly overhanging and bulging. Sherds showed that the general technique of the red-slipped pottery was still the same as that prevailing more than 5 meters above in Level 7. A lower sublevel was marked by a hard, light-colored floor (3*a*) about .50 below the base of Wall 1*a*. A broken door socket lay upon this floor. The corner (4*a*) of Room 4, with *kerpich* walls on stone foundations, was also below the level of the other walls. A stone-lined pit (4*b*) adjoined this

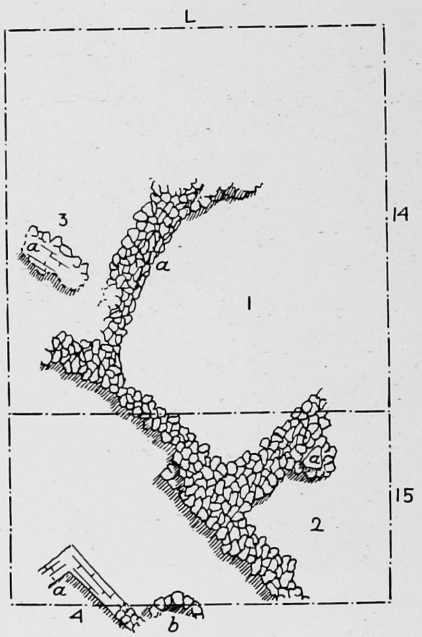

Fig. 38.—Plan of Level 10. Scale, 1:200

room. It is possible that the lower position of Rooms 3 and 4 was due simply to terracing down the mound slope.

As to sublevels indicated by architectural fragments only and located directly below or above main levels, we did not number them separately, although they were carefully recorded. Only extensive excavation could determine whether or not such wall fragments or floors had formed part of extensive architectural complexes the stones of which had been re-used during later occupations. No doubt many buildings were obliterated in this manner; it is actually surprising that so many foundations of buildings were preserved. In the very plot under consideration we have proof that wall stones had been re-used again and again. The ground-off edges of the Hittite Empire wall stones contrast strikingly with the newly broken and sharp-edged stones of early Period I walls (Fig. 39).

The most interesting feature of Level 10 was a pit (2*a*), rock-lined and covered with a flat stone slab. Not until Level 11 had been excavated was the true purpose of this pit recognized. On the lower level a big storage jar (Fig. 40) appeared directly below the pit (cf. 2*a* in Fig. 38 with 1*b* in Fig. 41), and it became clear that the combination formed a cistern. The slab covering the pit in Level 10 was about 2 meters above the mouth of the jar. This jar is described on page 47.

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Level 11

The few architectural remains present in Level 11 (Fig. 41) were merely fragments of weak foundations. On Wall 1*a* traces of yellowish brown *kerpich* were noticed. A large fragmentary storage vessel (2*a*) was found north of Room 1. It seems to have been stationary and sunk into the floor, as indicated by its position a little below the floor level.

Fig. 39.—Relative Positions of Level 10 and the Alişar IV Citadel Wall Above

The latest Period I settlement, Level 7, was 8 meters above Level 11, and earlier deposits continue below the bottom of the excavation. The pottery of the lowest level excavated is cruder than the best specimens of the upper levels, and as a rule lacks the high luster of the later vessels; but there is still red ware, and the general run of other objects is the same as during the latest phase.

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An interesting phenomenon deserves mentioning. A crack about 7 meters long and in some places as much as .05 wide was noticed in the west wall of the plot. It was almost vertical, but slightly inclined toward the center of the mound. At first we thought the crack was due to the

Fig. 40.—Weak Wall Remains of Level 11, with a Storage Pot of Level 10 Origin Used as a Cistern

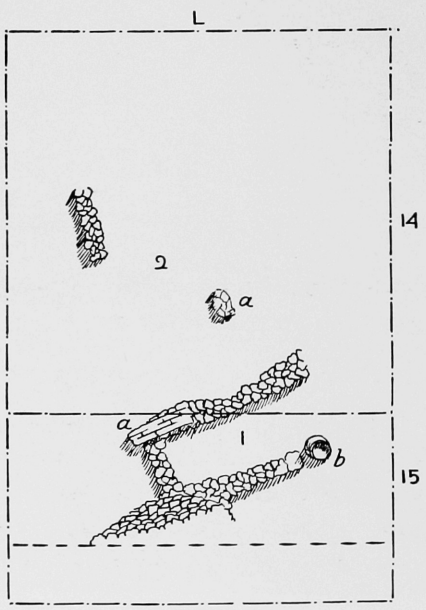

Fig. 41.—Plan of Level 11. Scale, 1:200

depth of the excavation, but a break in stratification showed that it had existed long before. On the side of the crack toward the center of the mound the superimposed refuse layers and floor strata had sunk .07.

More than 12 meters above the floor of Level 11, the Hittite Empire citadel was built on the occupational remains of about twenty centuries of human habitation (cf. Fig. 39). Truly, the

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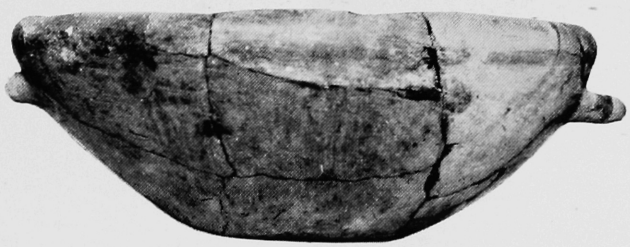
boundary wall of Plot L 14 is an awe-inspiring sight! About two millennia are expressed in terms of earth, wall foundations, piles of crumbled stone and *kerpich* structures, floors upon floors like geological formations, human and animal bones, rubbish, pottery vessels and countless sherds, decayed fabrics and wood, and weapons and utensils of stone, copper, bronze, bone, and shell. Looking up at the Hittite wall from Level 11, it seems as though the beginning of Period I has been estimated too conservatively!

POTTERY

The earliest Alişar pottery was handmade, apparently by the universal coiling process. In many cases a red slip was applied either to the whole vessel or to parts of the visible surfaces. Many vessels, particularly those with red slip, were highly polished. Such vessels (bowls and small jars), together with the few decorated pots, are the most pleasing specimens of Alişar I pottery. The paste was, as a rule, medium—sometimes coarser, tempered with sand which often contained larger particles of stone. The presence in Period I vessels of small oblong pits or holes about .005 long, identical with *kerpich* marks in the sun-dried bricks, suggests that plant tempering was used for both bricks and pottery. Other markings may be merely striations caused by the polishing-tool as it moved small stone particles.



b 135

FIG. 42.—PAINTED BOWL. SCALE, 1:4

b 37

FIG. 43.—CHALICE WITH PAINTED DECORATION. SCALE, 2:3

ORNAMENTED VESSELS

Ornamented pottery included bowls, cups, chalices, pitchers, a bottle, and jars. These vessels, though not as typical as the plain red ware, are interesting on account of their scarcity and because they are examples of very early pottery ornamentation. There are three kinds of ornamented pottery: painted, found at the lowest level, but frequent only at the highest level (7); incised, found at even the lowest level (11); and fluted, occurring as early as Level 10.

PAINTED

Bowl b 135 (Fig. 42; cf. Plate VII) is almost identical with Bowl b 379*a* (cf. Fig. 50) except that it has two horizontal handles and what is apparently an attempt at decoration. Several oblique strokes extend downward from the wash on the exterior rim.

A striking form found throughout Period I (but apparently not used later) is a round-bottomed chalice with two large handles. The bell-shaped body may be either convex (No. b 139, Color Plate I; cf. Plate VII) or concave (No. b 37, Fig. 43; cf. Plate VII). Both these

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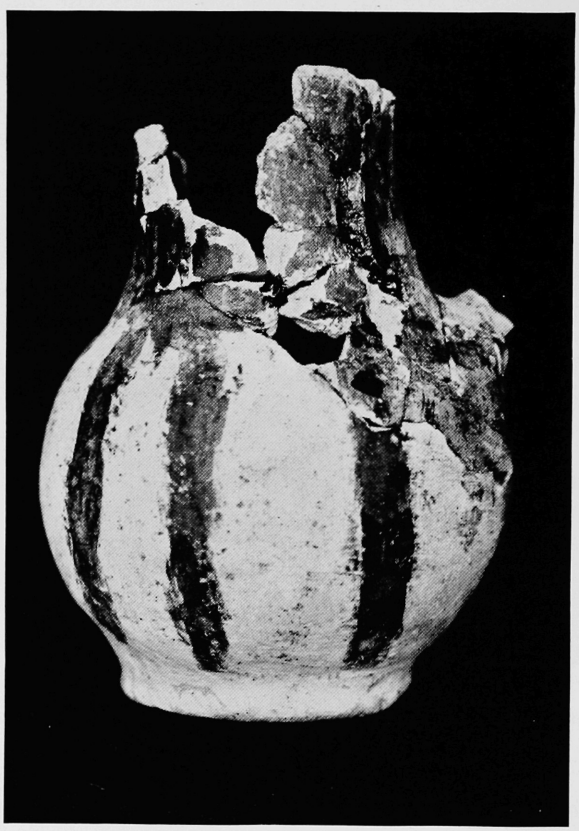
types occur at Kül Tepe also[1] and resemble vessels of Troy II[2] which may have developed from metal prototypes.[3] For decoration a brown-red or a brown and purple band extends from lip to lip, crossing at the bottom another band which covers the outer surface of each handle. The lip itself is painted to match the bands.

The most interesting painted vessel, Pitcher b 331 (Plate I; cf. Plate VIII), was found in the refuse layer between Levels 6 and 7 of Plots L 14–15. Its general technique is undoubtedly that of Period I; otherwise its find-spot would have permitted attribution either to Period I or to early Period III. This small pitcher had one handle (lost) and a short tubular spout. Three



a 1066

Fig. 44.—Pitcher with Painted Decoration. Scale, 2:3

ridges extend from shoulder to foot on the side opposite the handle. The ring bottom is slightly concave. Plant tempering is evident. The ground color is red-brown on the exterior and upper interior, while the bottom and the rest of the interior are light gray-brown. Grayish white, here and there pinkish, lines make the patterns on the upper body and neck.

A second decorated pitcher, No. a 1066 (Fig. 44), found in the same refuse deposit, is almost identical in form with No. b 331, but somewhat larger and without ornamental ridges. Both handle and spout are broken. The paste is medium. The badly fired surface is almost without slip, showing the grayish white color of the paste. Though somewhat smoothed by a rubbing instrument which left faint striations, the appearance is crude. The decoration is simple.

[1] Henri de Genouillac, *Céramique cappadocienne* II (Paris, 1926) 43 f. and Plates 30 and 49. The writer saw another specimen for sale at Kara Hüyük near by.

[2] Cf. Hubert Schmidt in Dörpfeld, *op. cit.* pp. 261 f.

[3] As suggested in the works just cited.

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From the red-slipped lip and neck ten vertical bright red polished bands, placed at irregular intervals, extend over the grayish white body to a point a little above the base. The bottom is stained dull red.

All the decorated potsherds illustrated in Plate IX came from the highest level of Stratum I. They are fragments of bowls, small jars, and larger cooking(?)-vessels. Their designs show simple parallel lines, parallel angles, abutting lines, and zigzag patterns. The colors are orange on red (b 34:14), light pink on red (b 34:4), white on red (b 34:25*a* and *b*, b 34:15, and

b 130

Fig. 45.—Small Bottle. Actual Size

b 35:9), and red on very light buff (b 36:343). A bowl fragment shows red on a yellowish brown interior (b 230:9) with plain red exterior, while a sherd of a large vessel (b 35:8*d*) has a simple broad band in red-brown on a brown base.

Incised

A small dark gray bottle, No. b 130 (Fig. 45; cf. Plate VIII), of unusually elegant form for this period, was uncovered in Level 7 of Plots L 14–15. Thirteen faintly incised lines encircle the shoulder, and three pairs of "breasts" are placed equidistant at the point of greatest diameter. The vessel is handmade as usual, although the well executed concentric incisions almost suggest mechanical aid.

Considerably cruder is No. b 2683 (Fig. 46; cf. Plate VIII). This jar was found under a Period I burial urn (b X68, cf. Fig. 92) below Stratum II in Plot DD 19 (cf. Fig. 113). On the light brown exterior, smooth except for plant tempering marks, two knobs protrude on opposite sides and are ornamented with concentric incisions; three lines encircle the shoulder. The two handles are simple knobs with vertically bored holes.

A jar or pitcher fragment (b 507, Fig. 46), found in Level 9 of Plots L 14–15, is interesting

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because it reminds one of Troy I[1] ornamentation. Well executed parallel lines are incised on the brown-red body and shoulder. Traces of white incrustation are noticeable in spots.

A red-slipped sherd (b 745:15, Fig. 46) with grayish incrustation or inlay was found in Plot R 6.

b 2683 b 745:15 b 507

FIG. 46.—INCISED JAR, INCRUSTED SHERD, AND FRAGMENT OF INCISED JAR. SCALE, 2:5

FLUTED

Fluting, a simple but pleasing ornamentation, is found on cups and jars. As a rule, the shallow grooves are vertical or oblique. Jar b 455, found in Level 9, Plots L 14–15 (Fig. 47; cf. Plate VIII), and Cup b 38, found in Level 7, Plots L 14–15 (cf. Plate VII), have light brown surfaces with a brown wash on the fluted parts.

b 455

FIG. 47.—FLUTED JAR. SCALE, 1:4

b 101

FIG. 48.—FLUTED CUP. SCALE, 1:2

Cup b 101 (Fig. 48) is ornamented with shallow vertical fluting. Its rim, exterior and interior, is coated with a brown-red wash. This shape persists in the small pots of early Period III. Cup b 125 (cf. Plate VII), similar to Cup b 101 in form and color, is ornamented with three pairs of "breasts" (cf. Bottle b 130).

Sherds of red and black fluted vessels occurred also.

PLAIN VESSELS

Alişar I plain pottery included bowls, cups, jars, cooking-pots, storage jars, and burial urns.

The bowl typical of Period I is illustrated by No. b 616 (Fig. 49; cf. Plate VII). It is almost hemispherical, with a small, slightly concave bottom. The rim tapers upward to a rounded

[1] Dörpfeld, *op. cit.* p. 251, Fig. 118.

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edge. Below the rim on the exterior are two slightly protruding knobs. In some cases three such protuberances were noticed. They were presumably intended to keep the vessel from slipping while being carried, and may be survivals of simple handles such as those of Bowl b 135 (cf. Fig. 42) or of "string-holes" like those used in Troy I.[1] Bowl b 616 has an all-over

b 378 b 2732 b 616

FIG. 49.—BOWL b 378, BOWL b 2732, AND TYPICAL BOWL b 616. SCALE, 1:4

slip like that of Pitcher b 331 (Color Plate I). Its color is not as deep and its surfaces not as lustrous as the best specimens of which we found fragments.

Bowl b 379*a* (Fig. 50; cf. Plate VII) represents a slightly different type. The interior and the exterior of the incurved rim are coated with a brown-red wash. The rest of the exterior shows light gray and brownish shades with black stains. The washed parts of the vessel are polished, but the others are simply smoothed.

In addition to these more common types, two unusual bowl forms are illustrated here. Though No. b 378 (Fig. 49; cf. Plate VII) was found in the second level (8) of Stratum I, it resembles Period II pottery in form as well as in color. Its shape is that of a truncated inverted cone. The coils have been smoothed in part by an instrument which left distinct traces. Its color, unusual for Period I, is light brown with buff shades. Bowl b 2732 (Fig. 49; cf. Plate VII) is an extremely crude vessel with one handle and an all-over red-brown crackled slip. It was found at Level 11, the deepest level of Stratum I reached to date. Another bowl form is illustrated by Bowl b 2534 (Plate VII).

b 379*a*

FIG. 50.—A TYPICAL BOWL. SCALE, 1:4

b 341

FIG. 51.—A TYPICAL CUP. SCALE, 1:2

Cup b 341 (Fig. 51; cf. Plate VII) is a plain, rather coarse vessel with a brown-red wash. Cup b 884 (Plate VII) shows another shape.

We found great quantities of sherds from jars and pitchers. The handles are either flat or round. The bodies have various shapes such as those shown in Figure 52. Spouts like that of Pitcher b 2733 are frequent. These pots are usually red-slipped and often highly polished. Nos. b 2733 and b 2730 (cf. Plate VIII) are unusually crude. They were found in the lowest Stratum I level (11). Variations of the jar form are shown by Jars b 2810 and b 2547 in Plate VIII.

[1] Dörpfeld, *op. cit.* p. 247.

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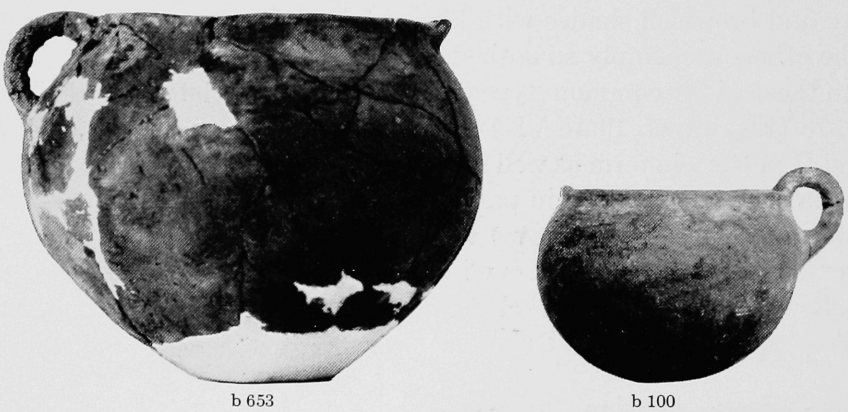
b 2730 b 2733 b 2547

FIG. 52.—SMALL JAR b 2730, PITCHER b 2733, AND SMALL JAR b 2547. SCALE, 1:3



b 653 b 100

FIG. 53.—COOKING-JARS. NO. b 653 WAS USED SECONDARILY AS A BURIAL URN FOR AN INFANT. SCALE, 1:4

3262

FIG. 54.—BURIAL URN UNCOVERED IN 1927. SCALE, 1:16

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Vessels with fire-blackened bottoms were probably cooking-pots. They all have small tongue-shaped protuberances (droppers) on the lip opposite the handle to facilitate pouring. No. b 653 (Fig. 53; cf. Plate VIII) was used as the burial urn for an infant (Skeleton b X9). It was not as well made as the average Period I vessel, and in addition had suffered from its first use as a cooking-pot. Jar b 100 (Fig. 53; cf. Plate VIII) is light brown inside and out.

A large storage jar was found in Level 11 (cf. p. 38 and Fig. 40). It is 1.15 high with a body diameter of .85. The outer surface is smooth, somewhat reddish brown. The paste, containing stone particles and marks of plant tempering, is rather coarse. The cross-section of the jar is oval; the bottom, small and flat. There are two rather small vertical handles a little below the flaring neck.

Several burial urns were uncovered in Plots IX and XVIII (in CC 13 and AA 15) and AA 16. No. 3262 (Fig. 54; cf. Plate VIII), the burial urn of Skeleton X1, Plot IX (in CC 13),[1] is .865 high with a rim diameter of .70, i.e., just large enough to accommodate a flexed body. The paste is coarse with many small particles. The exterior surface is brown and rather smooth. The interior is gray and rough.

MISCELLANEOUS OBJECTS

The few loom weights found are all of the same oval shape with a perforation near the narrow end (Fig. 55). They are crudely made of clay, with little or no firing.

b 2565 b 2726

FIG. 55.—LOOM WEIGHTS. SCALE, 1:4

b 2353 b 620 b 399

FIG. 56.—ORNAMENTED POTTERY BALLS. ACTUAL SIZE

There is a group of ornamented balls (Fig. 56) the purpose of which is problematical. The ornamentation of No. b 620 with concentric rings is identical with that of some pottery whorls. No. b 399 is rather unusual. It is divided into quadrants and covered entirely with parallel dotted lines. No. b 2353 is ornamented with dotted lines in groups of three.

Pottery spindle whorls and pottery figurines will be described in the sections on spindle whorls and figurines.

[1] The pitcher called No. 3262 in *OIP* VI 275–76 is really No. 3105, from Plot IX, depth uncertain. The statements made on those pages should be changed accordingly.

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SPINDLE WHORLS

The hundreds of whorls found at the Alişar mound are almost as important as pottery for distinguishing the culture strata. The purpose of the whorl was to give momentum to the rotation of the spindle to which it was attached. We have specimens of both plain and ornamented whorls made either of pottery or of stone, the stone being more frequent in Period I. There are some very small objects which may have been beads rather than whorls. Types of forms and ornamentation remained the same throughout this period.

POTTERY

The pottery whorls range in color from dark gray through brown to red-brown. Seen from the top, they are all circular, but their cross-sections vary in shape (Figs. 57 and 58). Each of these shapes is repeated in one or more of the succeeding strata; but the ornamentation is typical of Period I.

The most common ornamentation consists of dotted or (less frequently) incised parallel lines in series of two to five, curved or angular. Elaborations of this type are illustrated by Nos.

FIG. 57.—ORNAMENTED POTTERY WHORLS. ACTUAL SIZE

b 754 and b 934 (Fig. 58). Another type, with concentric grooves, is shown by Nos. b 408 and b 1014. There are also imitations of stone whorl ornamentation (b 1015), groups of two concentric rings (b 267), patterns of finely incised connected curves (b 40), and a whorl with four incrusted crosses on one face and incised swirls radiating from the central perforation on the opposite face (b 1589). An interesting type with encircling grooves is illustrated by Nos. b 859 and b 387, one showing cross-shaped, the other three-lobed, designs.[1] Traces of white incrustation appear on many of these ornamented pottery whorls.

Plain pottery whorls were relatively rare during Period I. Those found are crude and irregular. The color range corresponds to that of the ornamented whorls. The shapes are illustrated

[1] Cf. H. Schmidt in Dörpfeld, *op. cit.* pp. 424–28. Many forms identical with or similar to ours are there illustrated; but, due to lack of records, they are not arranged chronologically.

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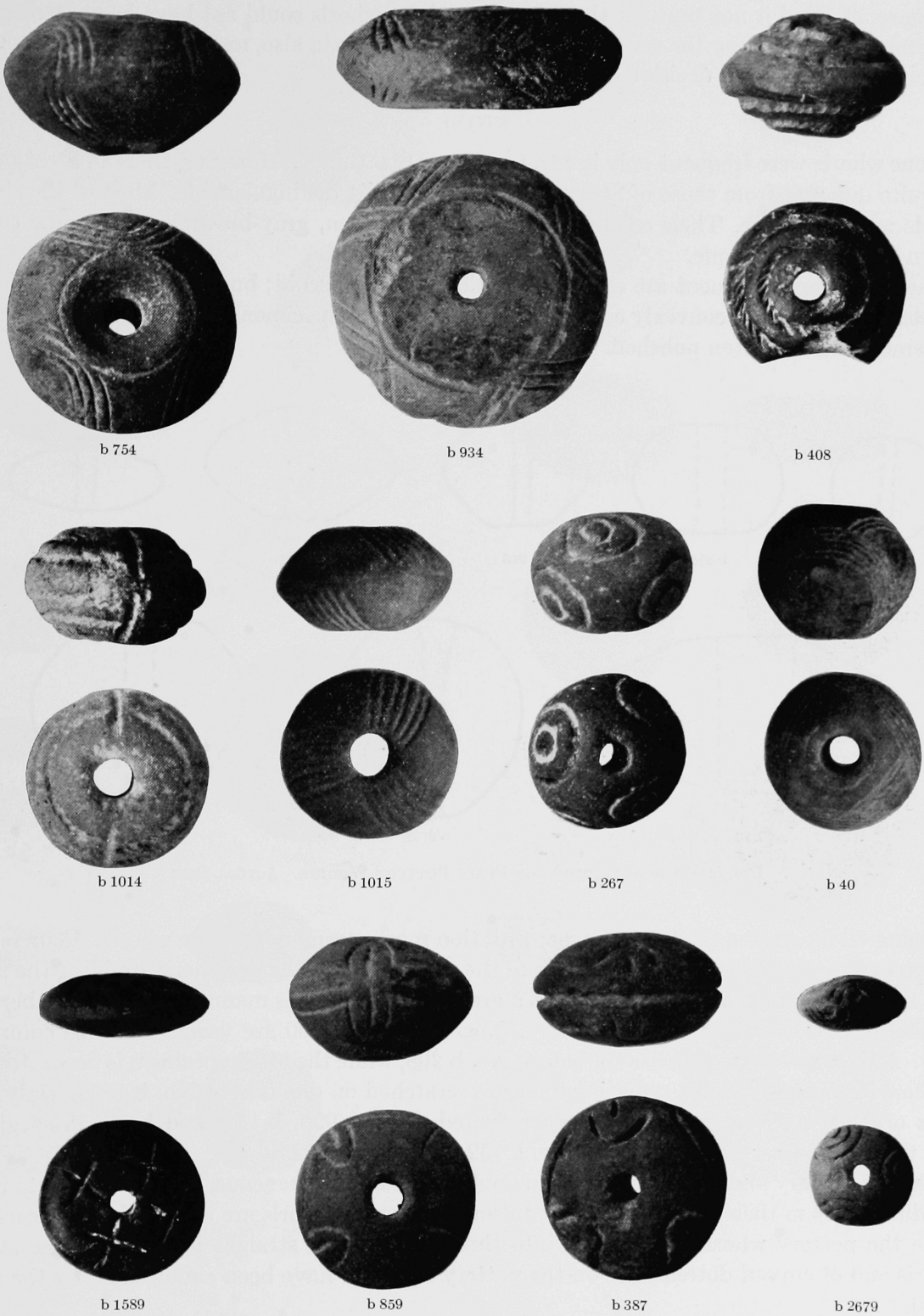

FIG. 58.—ORNAMENTED POTTERY WHORLS. ACTUAL SIZE

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in Figure 59. Had it not been for the find-spots, these whorls could not have been attributed definitely to Period I, for the same shapes occur in other strata also, and crudeness and general technique alone are not decisive criteria.

STONE

Stone whorls were frequent only in Stratum I and Stratum V. However, those of Stratum V are quite different from those of Stratum I and thus easily distinguishable. Most of the stone whorls are serpentine. Their colors are gray, grayish green, gray-brown, and in some cases brown or brownish purple.

The forms most frequent are elliptical, lenticular, and discoid; but flattened globes, "cart wheels," "spools," and convexly conoid and almost tubular specimens occur. They are usually well smoothed and often polished.

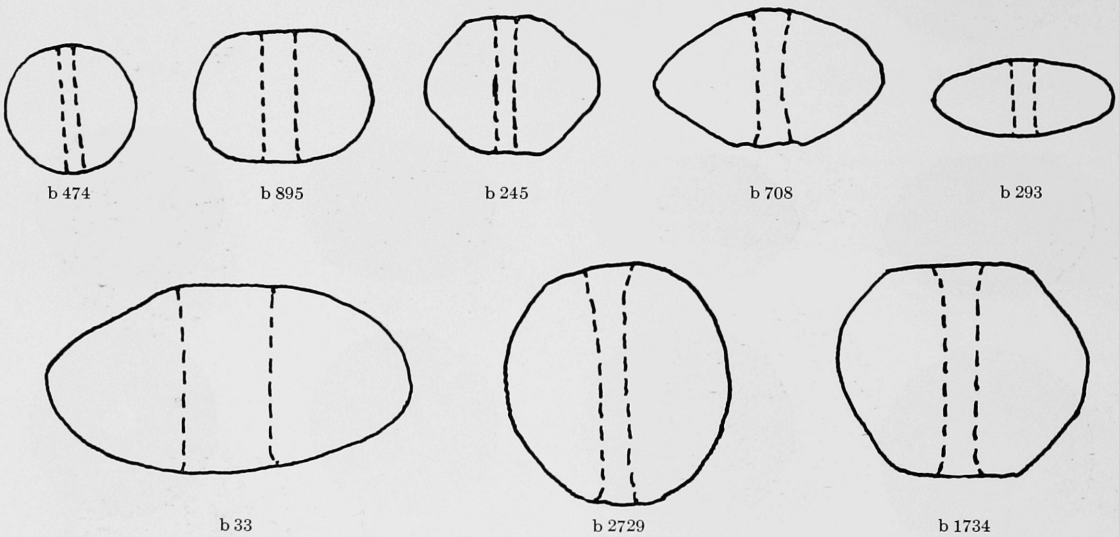

Fig. 59.—Cross-Sections of Plain Pottery Whorls. Actual Size

Figure 60 illustrates the type of ornamentation most common on stone whorls. Four series of two to five parallel incisions radiate from the perforation to the periphery, dividing the area into quadrants. In most cases both faces are decorated in this manner, but the numbers of parallel lines on the two faces may vary. Nos. b 298 and b 90 are variants of this common type. A zigzag pattern encircles the side of No. b 298, while the other specimen is decorated on the conoid top only. Faint radiating lines are scratched on one face of No. b 1585. Only the sides of Nos. b 759 and b 1329 are ornamented. Nos. b 928, b 152, and b 517 illustrate a rare type of all-over ornamentation, No. b 152 bearing a spiral design.

Though pottery and stone whorls are undoubtedly contemporaneous, it is interesting to note the differences in their types of ornamentation. The stone whorls are divided into four units, while the pottery whorls are divided into three. The use of straight incisions on the stone whorls and of curved dotted lines on the pottery seems to have been conditioned by the material.

Plain stone whorls are shown in Figure 61.

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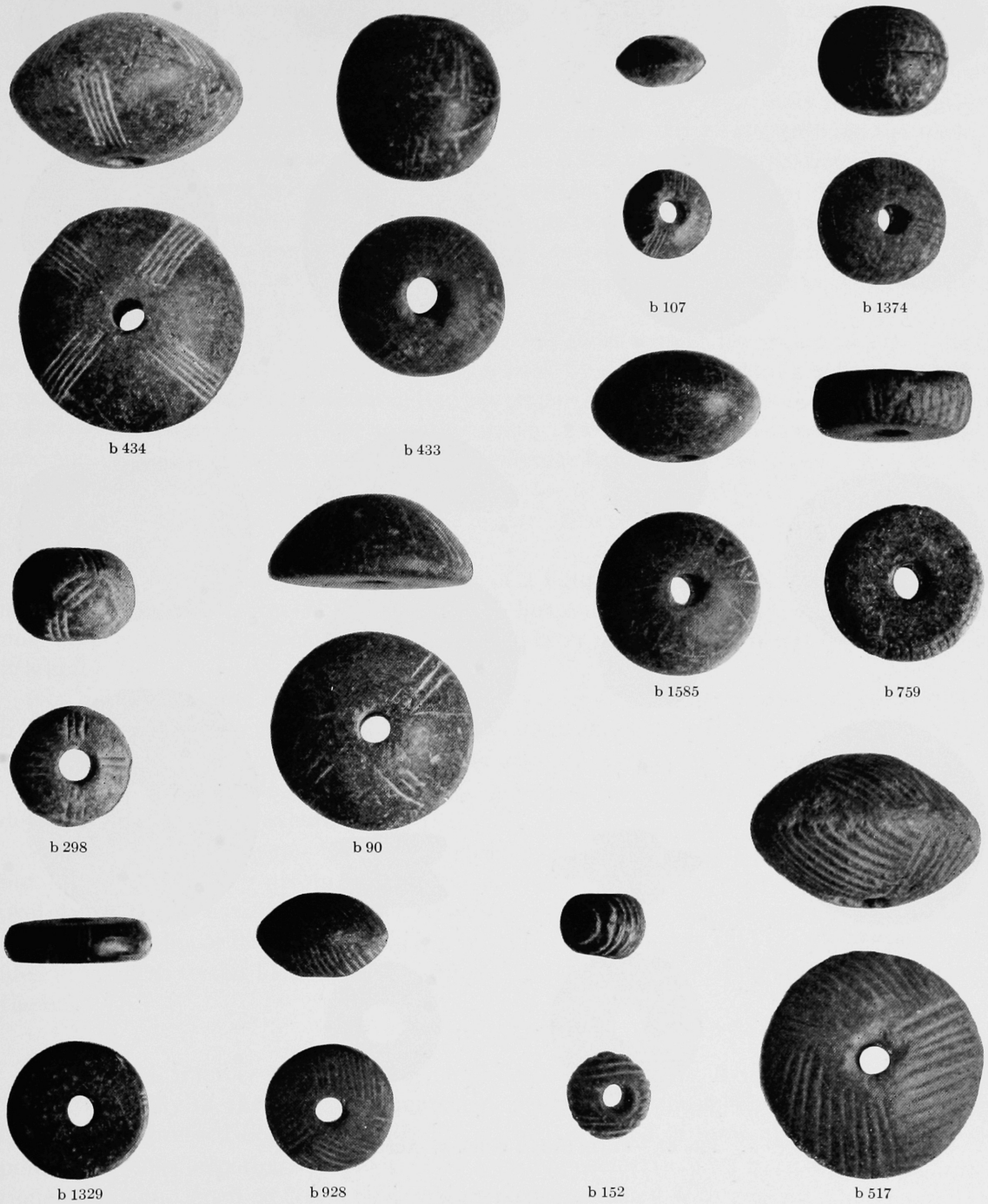

FIG. 60.—ORNAMENTED STONE WHORLS. ACTUAL SIZE

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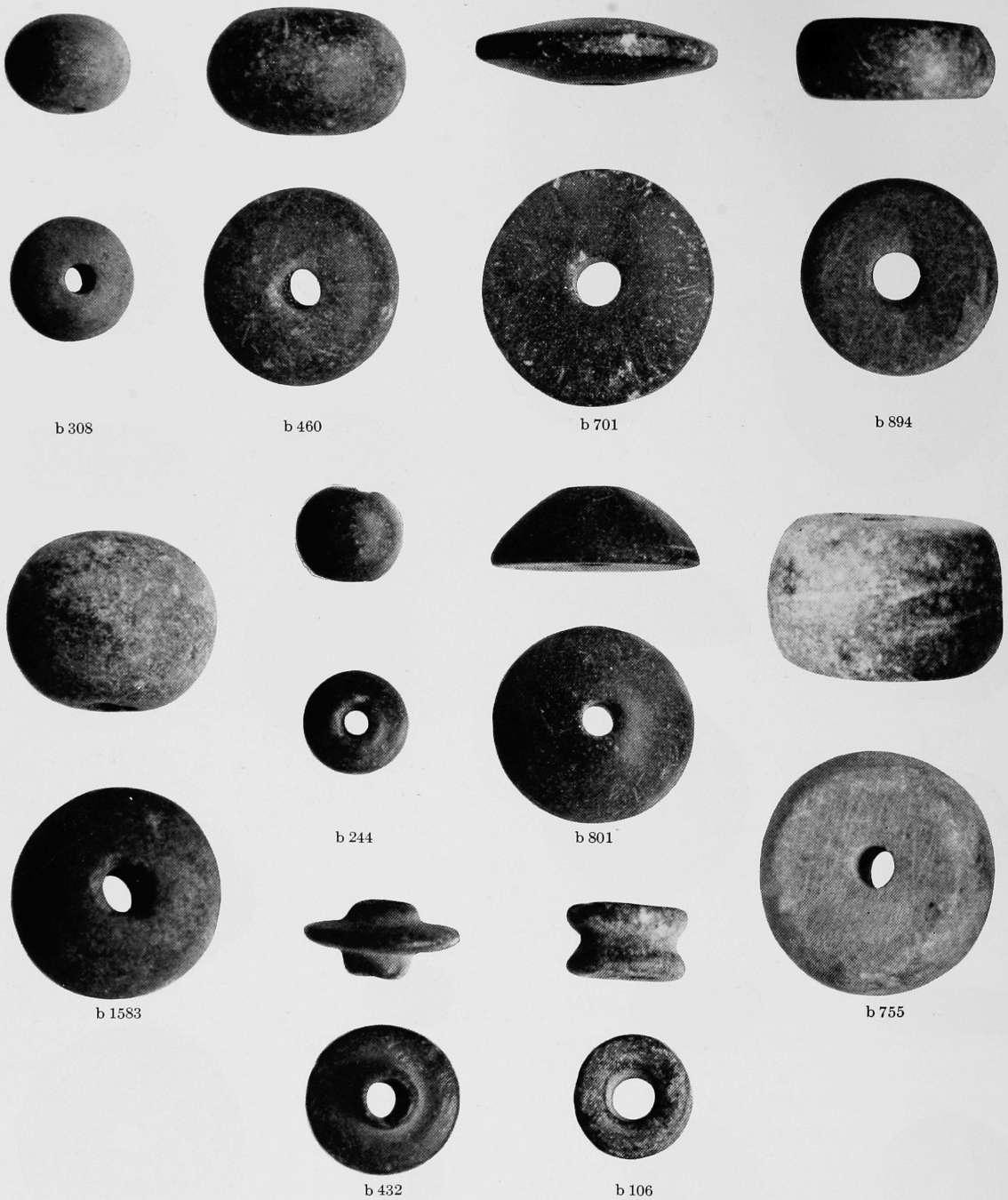

FIG. 61.—PLAIN STONE WHORLS. ACTUAL SIZE

FIGURINES

The anthropomorphic figurines of pottery, unfired clay, and stone and the zoömorphic figurines of stone are perhaps the most interesting objects from Period I at Alişar. They remind us of "idols" from Troy,[1] from the Aegean area,[2] from Kish,[3] and from other regions.

[1] Dörpfeld, *op. cit.* pp. 379 ff.

[2] Evans, *op. cit.* I 47–49.

[3] G. Contenau, *Manuel d'archéologie orientale* I (Paris, 1927) 359.

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ANTHROPOMORPHIC

The simplest, though not necessarily the earliest, figurines (Fig. 62) have a circular body with no indication of the extremities except an elongated protuberance for the neck and head (e.g., b 956). No. b 309, made of alabaster and bearing traces of a yellowish brown coating, has striations of problematical meaning on one side, and two faint lines which suggest hair extending from the neck to the center of the body on the other side, perhaps the back. No. b 957 is made of clay without any markings. No. b 790 has slight indications of arms.

The other specimens in Figure 62 show more details than those already described, but these also are highly conventionalized. No. b 2182, of slightly fired dark gray clay, found in Level 10 of Plots L 14–15, has rather pronounced arms. It wears a necklace from which three strings are suspended. The sexual part is indicated by a dot-filled rectangle. On the back a rectangle subdivided by four vertical lines marks the hair.

No. b 262, grayish white, in parts brownish, has short stumps for arms and legs. The front is plain, but the hair is again marked on the back by a pattern of straight lines.

Most interesting are the remaining four specimens in Figure 62. No. b 103 is of gray-brown pottery with irregular but rather smooth surface. Two wavy lines accompanied by dots indicate the hair. The eyes are marked by two circular depressions, the mouth by a dot. Seven incisions in the front of the neck represent probably as many necklaces. The navel is indicated by a circular depression with a dot in the center. The sexual part is apparently marked by a roughly rectangular incision, open below.

No. b 854 is probably the face and neck of a figurine similar to No. b 103. The eyes and mouth are represented by tiny dots. Thirteen horizontal incisions on the extremely long neck may be necklaces. The neck base was reground after it had been broken, apparently to make it stand.

No. b 751 is a torso of smooth light brown pottery. It rather resembles Nos. b 2182 and b 262. Though the neck is lost, the pendants of a necklace remain. The sexual part is marked by horizontal dashes within a triangle. The navel is again a circular depression.

No. b 250 is a head fragment of smooth gray pottery. The eyes are indicated by circular depressions below long eyebrows.

We may probably assume that these figurines represent female deities, although breasts are not indicated, as they are in more elaborate specimens from other regions. They may be prototypes of the fertility goddesses so widely worshiped in the ancient Orient.[1] Apparently they were charms or amulets, and their general likeness suggests that the people had a definite idea in mind as to the blessings they wanted to receive by modeling and wearing or keeping them.

ZOÖMORPHIC

We found a number of highly conventionalized zoömorphic figurines made of serpentine (Fig. 63); many of them seem to represent sheep. Their most characteristic feature is the laterally compressed body. The sides are slightly abraded in most cases and suggest use as polishing-stones or perhaps as palettes for grinding cosmetics.[2] All have one or more perforations; and some, such as No. b 805, have depressions inlaid with grayish white chalky material. The wool is usually marked by a series of incisions on the back (e.g., a 767). No. b 805 has no such incisions, but here the wool seems to be marked by wing-shaped protrusions on either side. The head, as a rule, is merely suggested by a stump, and is rarely as naturalistic as in No. b 1556, which has a definite muzzle and eyes indicated by horizontal dashes. The

[1] Cf. G. Contenau, *La déesse nue babylonienne* (Paris, 1914).

[2] Cf. *OIC* No. 11, p. 62.

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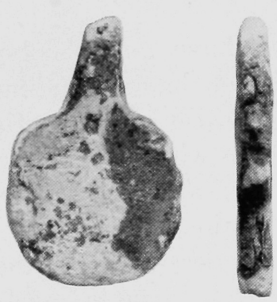
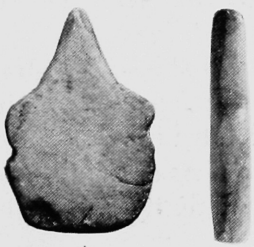


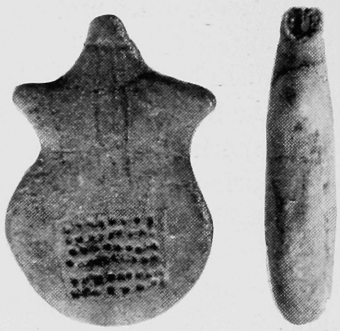
b 956

b 957

b 309

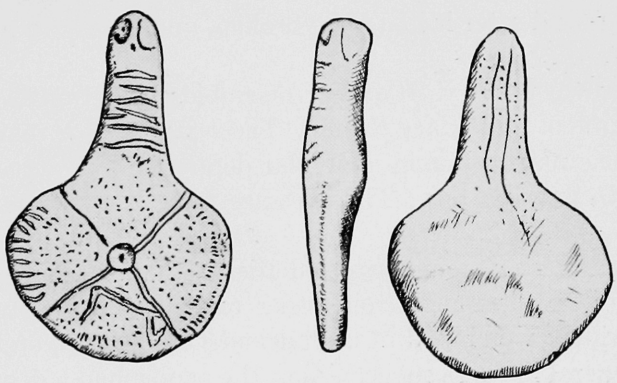


b 790

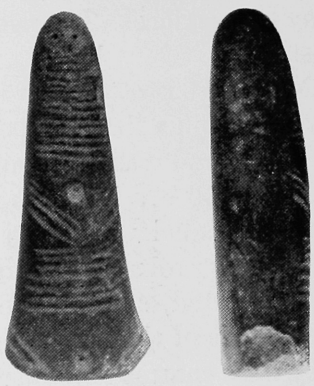


b 2182

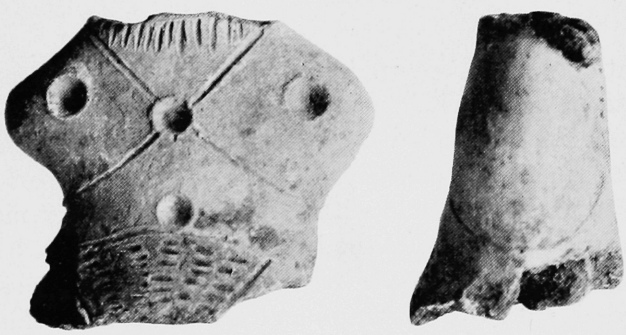
b 262



b 103



b 854



b 751

b 250

FIG. 62.—ANTHROPOMORPHIC FIGURINES. SCALE, 4:5

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form of No. b 437 suggests that it was once attached to material of perishable nature (cf. No. b 44).

No. b 1580, though different from these specimens, must have had a similar purpose. It bears on its top the posterior part of a crouching animal and has a lateral perforation. Either the object broke and was reground or the anterior part consisted of perishable material.

The head of No. b 44 reminds one of a dog. That the vanished body was of perishable material is suggested by the fact that the back of the head is scooped out, leaving only a thin wall

FIG. 63.—ZOÖMORPHIC FIGURINES. SCALE, 2:3

in some places. The upright ears are marked with horizontal incisions. The eyes are filled with the usual white inlay, as are two depressions on the lower jaw, two on the front of the chest, and one at each side. There is one more inlay on top of each ear and perhaps one in the center of the chest.

Figurine b 753 may represent a dog. Each pair of legs is combined into a single rectangular projection; the head is missing; tail and anus are indicated; and two groups of three incised lines extend across the back.

SEALS

Only stamp seals of stone and copper occurred in Stratum I (Fig. 64). The simple geometric stamp designs consist of plain or hatched triangles, rectangles, or crosses.

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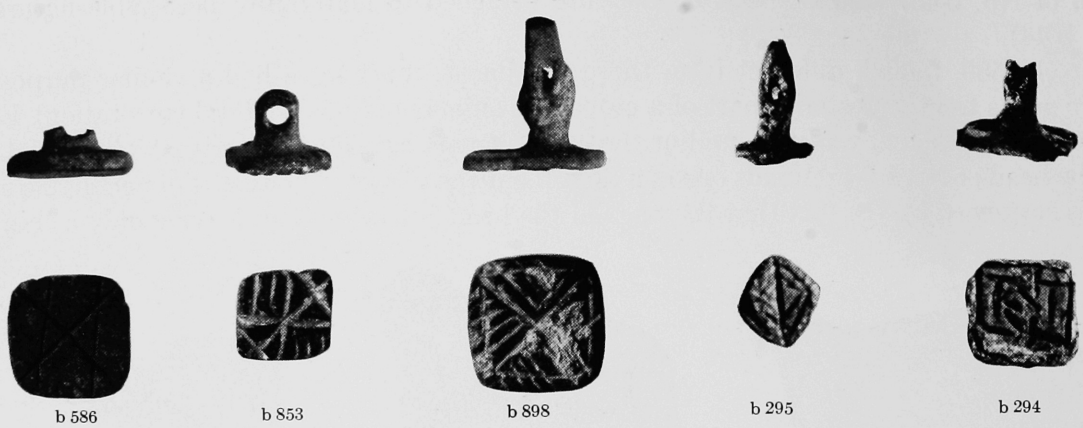

FIG. 64.—STAMP SEALS. ACTUAL SIZE

FIG. 65.—SPINDLE-SHAPED POINTS, SPATULATE POINTS, A BLADE OF COPPER OR BRONZE, AND AN AWL(?). ACTUAL SIZE

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The two stone stamps here illustrated (b 586[1] and b 853) are apparently made of serpentine. Both have short perforated handles.

Of the three metal seals shown, Nos. b 898 and b 295 have flattened handles somewhat longer than those of the other specimens and perforated through their expanded centers. The pattern of No. b 898 is interesting because it occurs on later stamp seals also. The somewhat intricate pattern on No. b 294 is deeply grooved.

METAL OBJECTS

There is no doubt that most of the metal objects found in Stratum I are copper, though it is possible that bronze was discovered before the end of the period.[2]

Fig. 66.—Bracelets and Small Rings of Copper or Bronze. Actual Size

Of other metals only one small point or rivet(?) of lead (b 340; cf. p. 61 and Fig. 70) occurred in Stratum I. At present we are inclined to consider this an intrusive Alişar II object.

The copper or bronze objects obtained from Stratum I include the following types: spindle-shaped points, spatulate points, a dagger blade, an awl, bracelets, small rings, and pins.

Though spindle-shaped points were seemingly most frequent in Stratum II, they occurred in Stratum I and in all the subsequent strata as late as the Roman period (Stratum VI). It is not impossible that these spindle-shaped copper or bronze points were used as arrowheads or

[1] Though found in the Alişar IV layer above Stratum I, it undoubtedly belongs to the earlier period, as shown by its character.

[2] Cf. pp. 29–30 and notes.

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as spearheads, at least in those strata where weapon points of other shapes seem to be absent. At the same time their shape qualifies them for various uses such as drilling, engraving, and the like. Most of these spindle-shaped objects have a rectangular, square, or round cross-

Fig. 67.—Pins of Copper or Bronze. Actual Size

section in the region of greatest expansion, from which they taper to a sharp point at one end; the opposite end may be somewhat rectangular or round. Examples (Fig. 65) are Nos. b 2569, b 845, b 1375, b 105, b 786, and b 900.

Three specimens (b 520, b 32, and b 428, Fig. 65) have spatulate ends.

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Blade b 921 (Fig. 65) occurred in Level 10 of Plots L 14–15, i.e., the second level from the present bottom of the excavation. It is one of the best pieces of metal work so far uncovered in Stratum I. The lanceolate and double-edged blade with diamond-shaped cross-section was originally about .13 long, including the trapezoid handle piece. The breadth at the shoulder is .033; the thickness, .0025.

No. b 122 in Figure 65 may be an awl or a similar tool. One end is missing; the other has a rounded tapering point.

Bracelet b 923 (Fig. 66) from Level 10 of Plots L 14–15 is one of the best pieces of metal work from Stratum I. It is an almost perfect circle. Its outer margin is ornamented with incised lines and crosses. Two bracelet(?) fragments (b 817 and b 789) were found in the refuse between the fertile Levels 9 and 10 of Plots L 14–15. Fragment b 817 also has incised strokes on the outer margin. Fragment b 789 is plain with oval cross-section .0015×.003.

Fig. 68.—Pins of Copper or Bronze. Actual Size

It is possible that Nos. b 109 and b 297 (Fig. 66) were used as finger rings. No. b 109 is a band .01 wide and .0005 thick. It overlaps .005 and forms a circlet .01 across.

No. b 1737 (Fig. 66) consists of two attached rings irregularly oval in shape. They remind us of certain Alişar II finds of connected lead rings which we consider small cash. The present specimen was found in the refuse layer between Levels 9 and 10 at a depth where we would not expect Alişar II influence. It may be that copper or bronze "money" similar to the lead rings existed in Anatolia during Alişar I, though we would expect to find more specimens in this stratum if this were true.

The characteristic feature of a pin is its head form. Details such as ornamental incisions or perforations are incidental. The entire pin collection of Alişar I has therefore been classified on this basis. The Alişar I series includes the following head forms: globular, elliptical, semi-globular, conical, pyramidal, square-topped, pear-shaped, convexly discoid, concavely discoid, and coiled.

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Pins b 470, b 2570, b 344, b 1577, and b 927 illustrated in Figure 67 have globular heads, except that the head of Pin b 927 is slightly flattened on two sides.

Fig. 69.—Pins of Copper or Bronze. Actual Size

The series of pins with elliptical heads (Fig. 67) includes Nos. b 846, b 15, b 840, b 2653, b 847, and b 1383. Pin b 847 shows a simple ornamentation on the shaft like that on certain Period II pins; three incised lines encircle the shaft just below the head. Two or four such

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incisions were noticed on other pins with the same head shape. One pin shaft has a nearly square cross-section in contrast to the usually round shafts.

Specimens with semiglobular heads (Fig. 68) include Nos. b 29, b 2652, b 2680, and b 749. The shaft of Pin b 2652 has an oval cross-section. A new feature appears in No. b 2680 (found with Skeleton b X69); it has an oblong perforation .0045 long through a flattened portion of the shaft .0011 below the head. The same feature was noticed on another pin, No. b 512 (Fig. 69), of this period and on two Alişar II pins, Nos. b 2269 and b 1879 (cf. p. 159).

Conical heads are represented by Nos. b 848, b 925, and b 438 in Figure 67. The shaft of Pin b 848 is broadest .025 above the point, and its head has a diamond-shaped cross-section. The shaft of Pin b 925 is broadest at about the mid-point.

The most frequent form of Alişar I pins is that with a pyramidal head. Like all common Period I types, this form is found in Stratum II also, but there it is less frequent. One example has been found as late as Stratum V. Examples shown in Figure 69 are Nos. b 1056, b 1333, b 124, b 136, b 102, b 897, b 394, b 924, b 483, b 355, b 13, and b 1013. All these pins are plain. They occurred from the uppermost to the lowermost levels of Stratum I.

There are two unusual head shapes illustrated in Figure 69: No. b 381*k* with square-topped head and No. b 850 with pear-shaped head.

Fig. 70.—Two Objects of Copper or Bronze and a Lead Object (b 340). Actual Size

There is only one pin (b 512) with a convexly discoid head (Fig. 69). Its shaft is drawn apart .02 below the head to make a vertical slit (cf. Pin b 2680, Fig. 68).

Pin b 705 (Fig. 69) has a concavely discoid head.

Coiled heads are represented by Pins b 108, b 296, and b 706 in Figure 67. The heads are formed by rolling up the ends. The shaft of No. b 108 is slightly flattened below the head. The coiled head persists as late as Period V.

No. b 398 (Fig. 70) is a simple crescent-shaped object, perhaps an ornament. It is .001 thick and has a perforation at either end. No. b 60 is a wire fragment.

The only lead object (b 340, Fig. 70) so far found in Stratum I is a small point with rectangular cross-section .003×.004. It was found in the refuse between Levels 8 and 9 of Plots L 14–15. The find layer is rather early; still we must consider the specimen as intrusive from a later period unless other lead objects are found in Stratum I.

Metal stamp seals have been described in the section on seals.

STONE OBJECTS

Stone, of course, played an important rôle in the industries of the Chalcolithic age of Alişar. Many tools and other objects then made of stone were later replaced by metal; but some stone objects were kept with only slight modifications during the historical periods (cf. p. 30, n. 3). Tools, weapons, implements, and ornaments of Alişar I include mace heads, hammers, flake

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knives, hatchets, celts, polishing-stones, hand mills, pestles, beads, small polished stones, "miniature hammers," ring stones, and quartz crystals. Stone door sockets have been described on page 33. The materials are diorite, quartzite, chalcedony, obsidian, and some softer stones such as serpentine.

The almost universal use of certain types of stone objects, such as hand mills, mace heads, celts, and the like, is only partly due to diffusion. It seems natural that peoples (such as the pre-historic Egyptians, the early Chaldeans, the Neolithic Cretans, and our Anatolians of Period I) living under similar cultural conditions and dependent on the same raw materials came to produce similar or identical weapons and tools. On the other hand the Anatolian mace

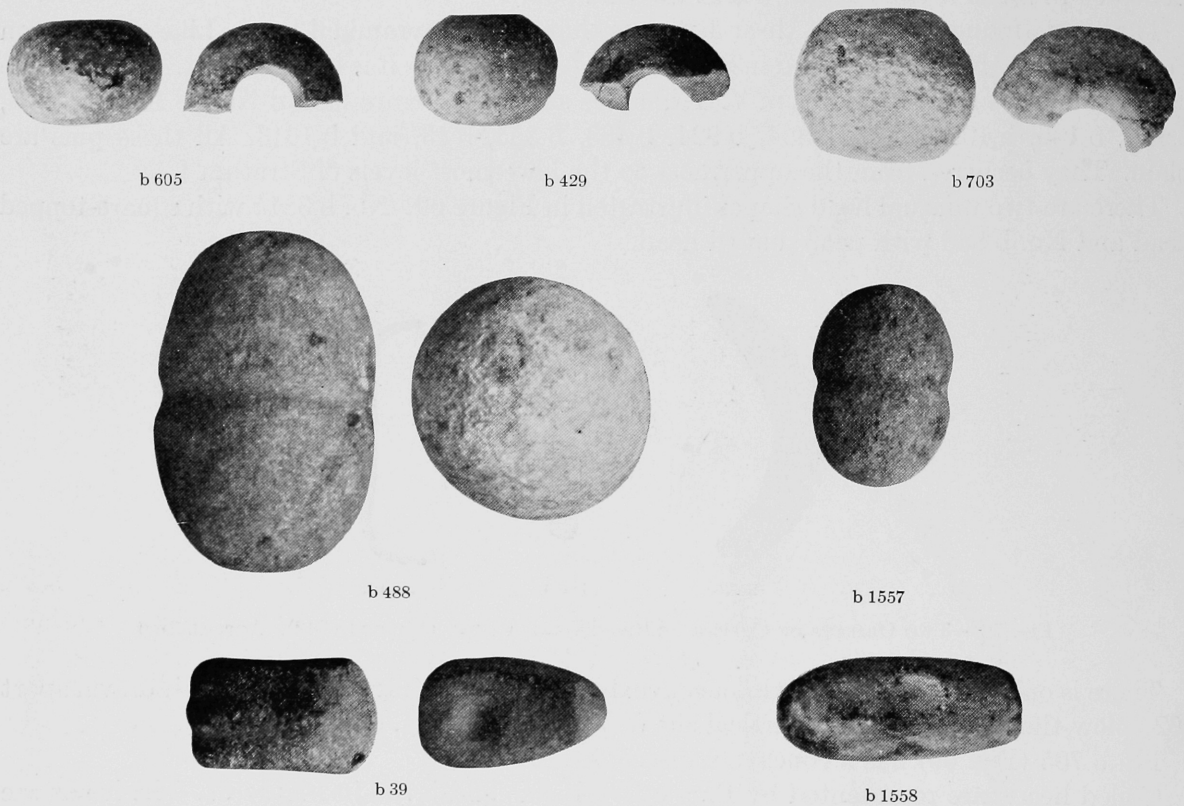

Fig. 71.—Mace Head Fragments and Two Types of Hammers. Scale, 1:3

head seems to have spread from Asia Minor to Crete during the late Neolithic period of that island.[1]

The typical mace head of Alişar I is a ring, in some cases almost globular, with tubular or biconical perforation (b 605, b 429, b 703, in Fig. 71). Serpentine, diorite, and quartzite specimens were found. As a rule they were smooth, even polished; but some were battered, suggesting that they had been used as hammers in addition to their actual purpose as weapons.

The only hammers which appear efficient are illustrated in Figure 71. Hammer b 488 is apparently of quartzite; No. b 1557 is made of rather soft porous stone. These hammers have an all-around groove and could be fastened to a handle with a leather thong or the like. The hammering surfaces are somewhat flattened and battered by use. Some polishing-stones may have been used as hammers also, as suggested on page 63.

A peculiar type of small hammer is oblong with a depression on one side of its long axis

[1] Evans, *op. cit.* I 54 and Fig. 15*a*.

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(b 39 and b 1558 in Fig. 71). No. b 39, which is rather more elaborate than the others, has a polished and rather deep depression. It is probably the spot where the tool joined the handle, though we do not know how it was attached. In any case these tools could not have been used for hard hammering. "Miniature hammers," which must have had a purpose other than that of implements, are described on page 67.

Flake knives of chalcedony and obsidian such as those frequent in Stratum I are found in almost all regions of the old and new worlds during certain periods. The stone flakes of Alişar I (Fig. 72) have a triangular or trapezoid cross-section. One or both cutting edges are retouched and often distinctly serrated. This serration may in part be due to accidental chipping while in use. Most flakes have one squared-off end, in some cases perhaps produced by fracture. The other end is sometimes round or pointed and retouched in the same manner as the lateral edges. Oval flakes occur which are retouched all around.

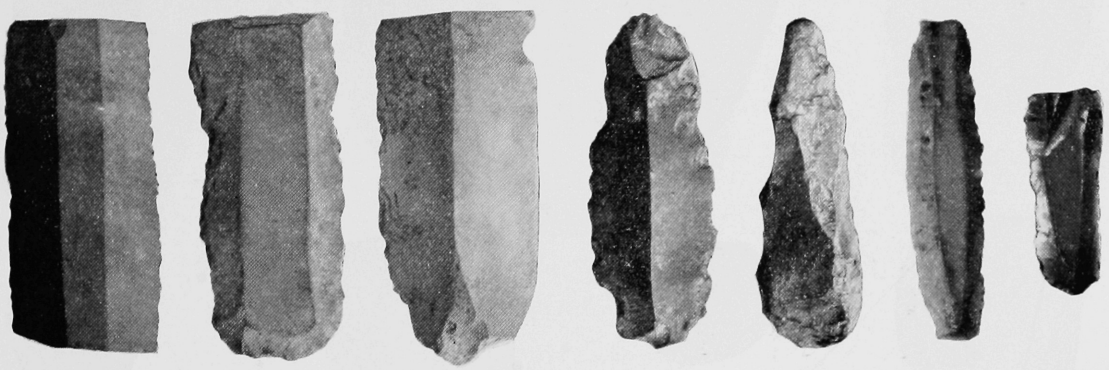

FIG. 72.—CHALCEDONY AND OBSIDIAN FLAKES. SCALE, 2:3

Hatchets, like mace heads, occurred only in fragments (Fig. 73); but enough of No. b 388 is preserved to illustrate the type of tool under consideration. It has a blunt hammering end and an ax blade. Such a tool is too small to have been very efficient as an ax; No. b 388 was only about .10 long. The fracture nearly always occurred at the perforation; sometimes the broken surface was reground (e.g., b 2279), but it is hard to imagine that such a fragment was very useful.

Like the flake knives, celts occurred universally during certain periods. Such celts (Fig. 74) were used at Alişar as late as Period V. Most of them were made of hard stone, diorite or jadeite(?), well polished. Some seem to have had a non-utilitarian purpose, as suggested by their blunt "cutting" edges or the softness of the material (serpentine). Celt b 384, highly polished, seems to be the only efficient tool of the series here illustrated. Celt b 2728 is perforated at the head end and has a blunt edge, while No. b 2278 has a hollow blade and was apparently meant only as a pendant.

Stones of irregular form, but mostly oval, were used for polishing pottery vessels and probably other domestic objects (Fig. 75). They are of hard siliceous rock or of diorite; one or more rubbing surfaces are polished by use (cf. polished stones, p. 66). They may have been used as hammer stones also, as suggested by battered ends on Nos. b 480 and b 1272 (cf. hammers, p. 62).

The hand mills and grinders (Fig. 76) are of no chronological value (cf. p. 30, n. 3). They are usually of granite or basalt, roughly oval or rectangular. The grinding surfaces of the mills are concave as a rule, owing to wear during the grinding process. The hand grinders, however, are often slightly convex. No elaboration of form was even attempted during Period I. One

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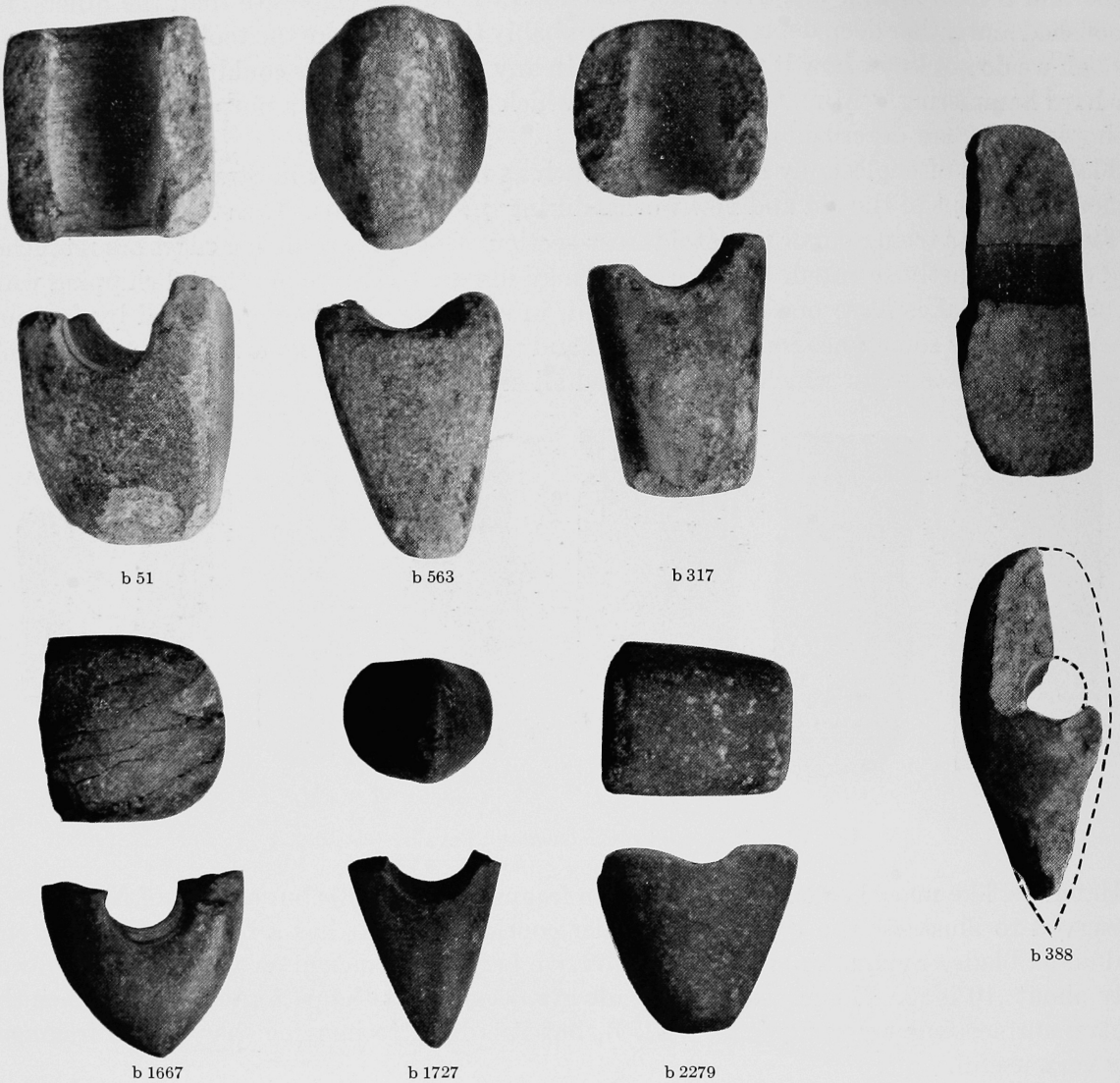

FIG. 73.—HATCHET FRAGMENTS. SCALE, 1:2

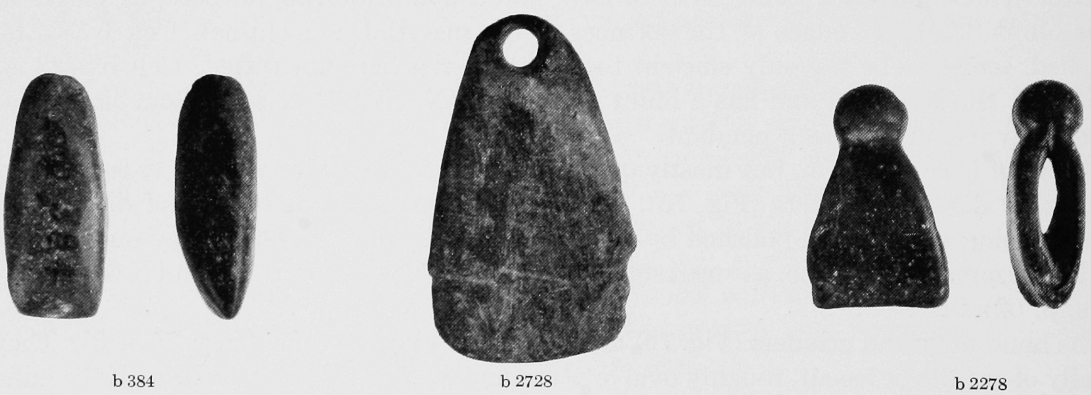

FIG. 74.—STONE CELTS. ACTUAL SIZE

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FIG. 75.—POLISHING-STONES. SCALE, 1:2

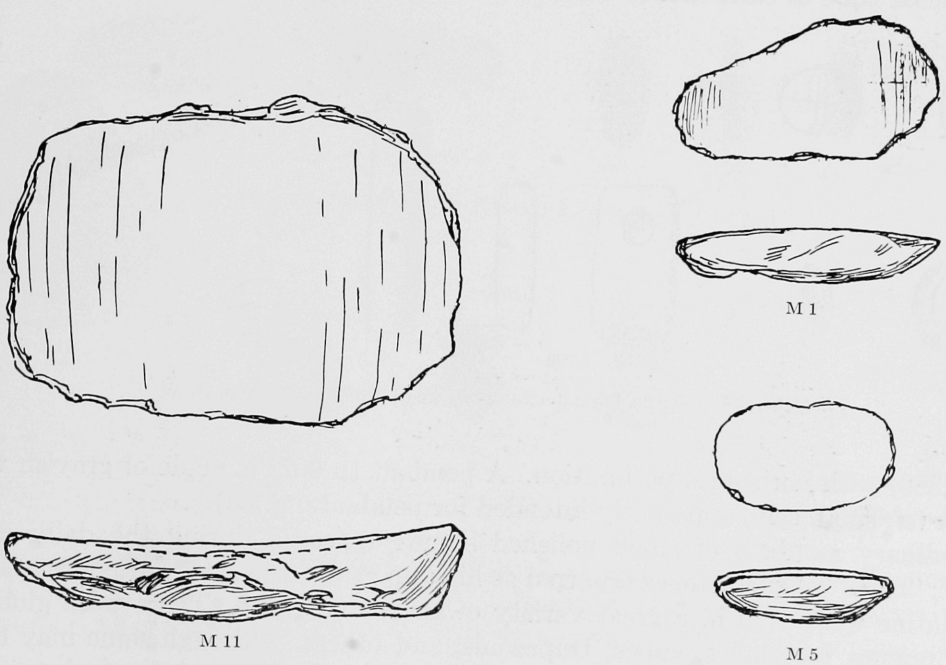

FIG. 76.—HAND MILLS AND GRINDERS. SCALE, ABOUT 1:8

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side of an adequate rock was simply straightened by pecking until the mill or grinder was ready for use.

The stone pestles (Fig. 77) are usually small, cylindrical or rectangular, and made of hard stone, diorite or quartzite. Pestle b 764 is of softer tufaceous stone.

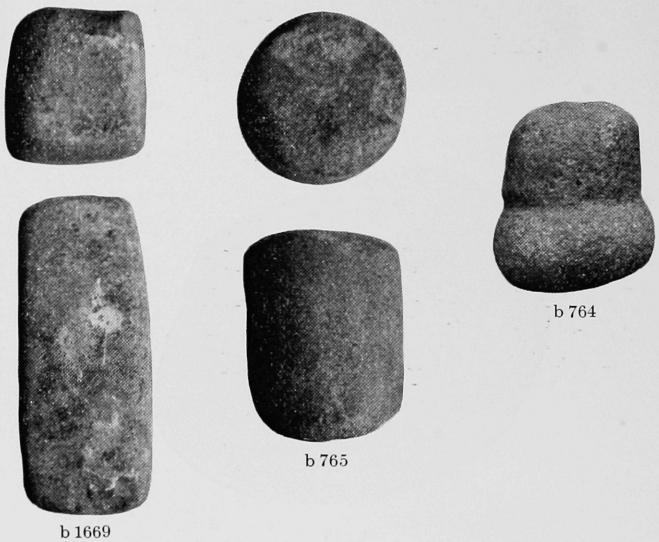

Fig. 77.—Pestles. Scale, 1:3

We found few ornaments in Stratum I. The stone beads illustrated in Figure 78 include a dark gray serpentine bead (b 1330) of whorl type with identical decoration of cross-shaped incisions on either side of an equatorial line; a small rectangular bead (b 960) of the same material; a polished tube of carnelian (b 380); and a convex cone of dark gray-brown and white

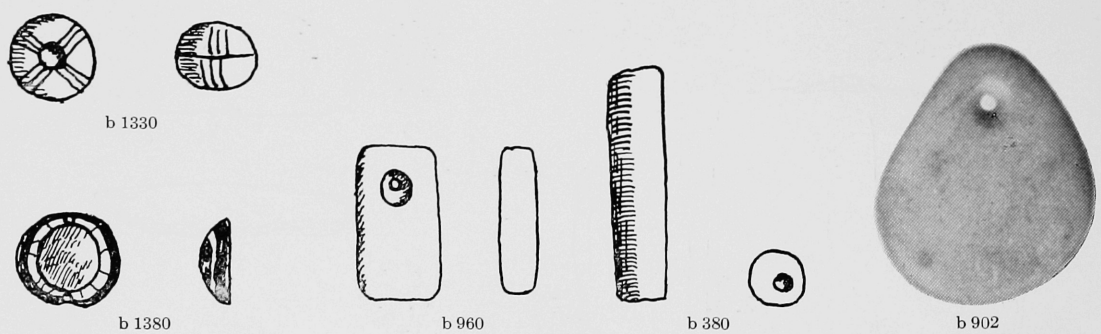

Fig. 78.—Stone Beads and a Stone Pendant. Actual Size

agate (b 1380) with horizontal perforation. A pendant (b 902) is made of grayish white siliceous rock (cf. small celts apparently intended for pendants, p. 63).

Extraordinary numbers of small polished stones appeared during the daily digging in Stratum I; "nests" of such stones occurred as high up as Stratum IV. Siliceous rocks, diorite, and serpentine were used in a great variety of shapes (Fig. 79). There were globes, ovals, triangles, prisms, rectangles, cubes, trapezoids, and others. Although some may have been used as polishing-stones (cf. p. 63), the careful polishing of all surfaces makes it doubtful

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whether most of them were used as tools. To the same class belong spindle-shaped hematite objects, also highly polished as a rule (b 1588, b 249, b 1570, b 503, and b 1571 in Fig. 79).

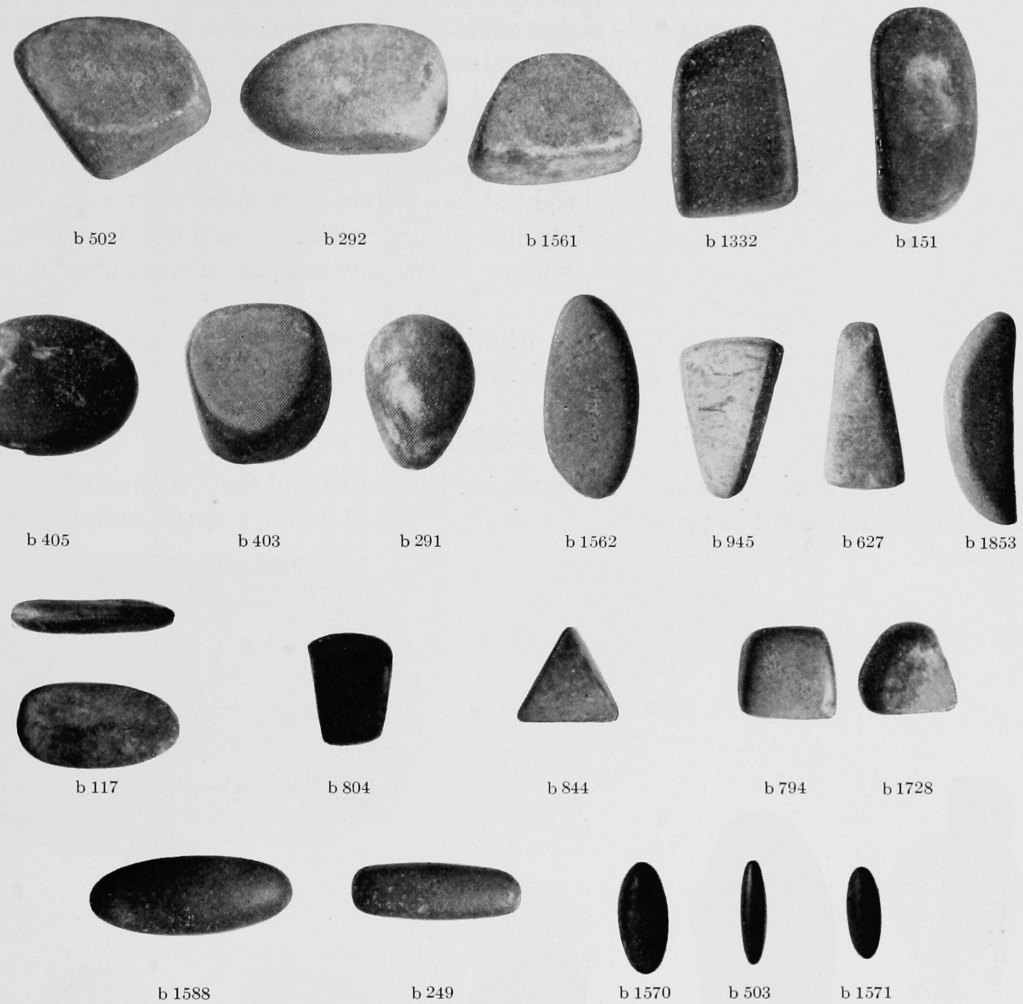

FIG. 79.—POLISHED STONES AND HEMATITE SPINDLES. SCALE, 1:2

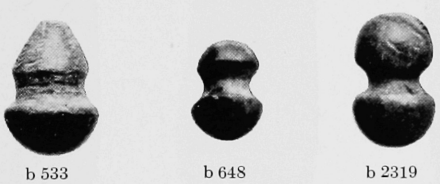

FIG. 80.—"MINIATURE HAMMERS." ACTUAL SIZE

The small serpentine objects in Figure 80, shaped somewhat like the grooved hammers and called "miniature hammers" (cf. p. 62 and Fig. 71) may have been employed as votive objects or as ornaments.[1] All of them occurred in the uppermost refuse of Stratum I in plots other than

[1] It has been suggested that they are buttons or toggles; cf. p. 71 and *OIP* VII 84–85.

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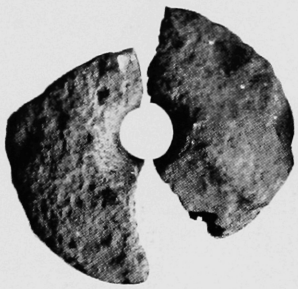
L 14–15. As a matter of fact, they were found in later strata also; and their absence from Plots L 14–15 makes it somewhat doubtful whether they should be attributed to Stratum I.

Only one ring stone was found (Fig. 81). Its use is uncertain. The material is rather soft, and the perforation is polished by use.



b 306

FIG. 81.—RING STONE. SCALE, 1:4

Some quartz crystals were associated with the fertile Levels 9 and 10 of Plots L 14–15. Other crystals occurred in Stratum II. The specimens of Alişar I had been left unwrought. Was it just curiosity which had induced the ancient Anatolians to collect the odd-looking bright stones? Were they charms, or were they valued for magic healing, like similar crystals among the American Indians? This, as well as many other questions, must remain unanswered for the present.

Stone spindle whorls, figurines, and seals have been described in the sections devoted to those objects.

BONE OBJECTS

Bone objects, particularly awls, were frequent in Stratum I and more frequent in Stratum II. After that they decreased in proportion to the increase of metal, though some types of bone

b 58 b 991 b 1592 b 1593 b 382 b 811 b 954

FIG. 82.—BONE TUBE, SPATULATE FLAKES, AND TABLET. ACTUAL SIZE

utensils persisted until considerably later times. The bone specimens of Stratum I include tubes, spatulate flakes, awls, spindles, and miscellaneous objects.

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There were only a few specimens of polished bone tubes (e.g., b 1592, Fig. 82) such as were frequent in Stratum II.

Thin polished bone spatulas(?) (b 1593, b 382, b 811, b 954, and b 58 in Fig. 82) are guide objects for Alişar I, though similar flakes with handles occur in Stratum II. The purpose

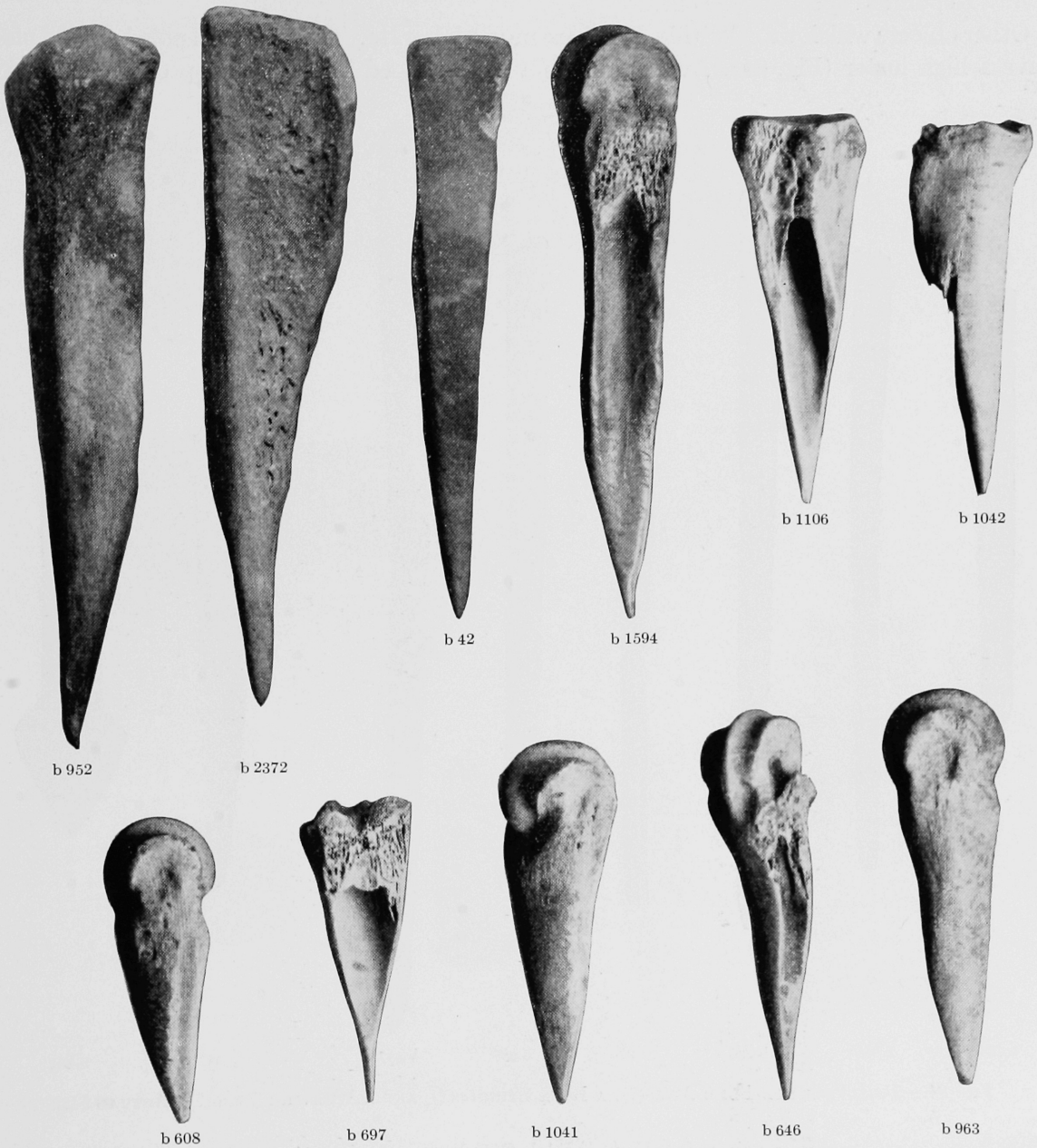

Fig. 83.—Short Bone Awls. Actual Size

of these objects is rather problematical. Some have sharp edges, suggesting use as scrapers, but most of them have blunt edges. Some have one end perforated for suspension and are well modeled. There is one long flake (b 424, not illustrated) of a split long bone with semi-oval cross-section. No. b 991 (Fig. 82) is a small tablet with rather sharp edges; the edge of one short side is particularly well adapted for scraping.

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The most important bone guide fossil in Stratum I is the short awl of sheep bone (Fig. 83) with "wheel-shaped" or plain epiphysis as head. Like other Stratum I types, it was found in Stratum II also. The length of these awls ranges between .047 and .131. They are usually smooth, sometimes polished, with a "steeple" point, as we called the sharply offset triangular point. Repointed specimens occur.

Other objects which we call "thin awls" are more elaborate. They are well polished and often have a high luster (Fig. 84). Awl b 788 has a cross-shaped incision on top of its head; Awl

Fig. 84.—Thin Polished Bone Awls(?), a Bone Spindle(?), and a Weaving Tool(?). Actual Size

b 989 has a perforation near the point; Awl b 260 has a perforation near the point and two tiny ones near the broken head end; Awl b 427 has one perforation near the point and one at the broken head end; Awl b 988 has one perforation at the head end; Awl b 397 is unperforated.

Spindles(?) such as No. b 504 (Fig. 84), with broad tapering lower part sharply offset from the thinner upper part, were used at Alişar from the present bottom level (11) of Plots L 14–15 until the time of the Hittite Empire (Alişar IV). If our identification is correct, the spindle

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whorl rested on the "shoulder." Usually the lower point is smooth or polished and the rest is rougher.[1]

A weaving tool(?) is illustrated by No. b 481 in Figure 84. It has a solid shaft converging toward the triangular head, which is split vertically and perforated from front to back.

The two horns (b 240 and b 486) in Figure 85 are polished, except the basal part of No. b 240. Their tips are flattened and rather blunt. They may have been tools for chipping stone.

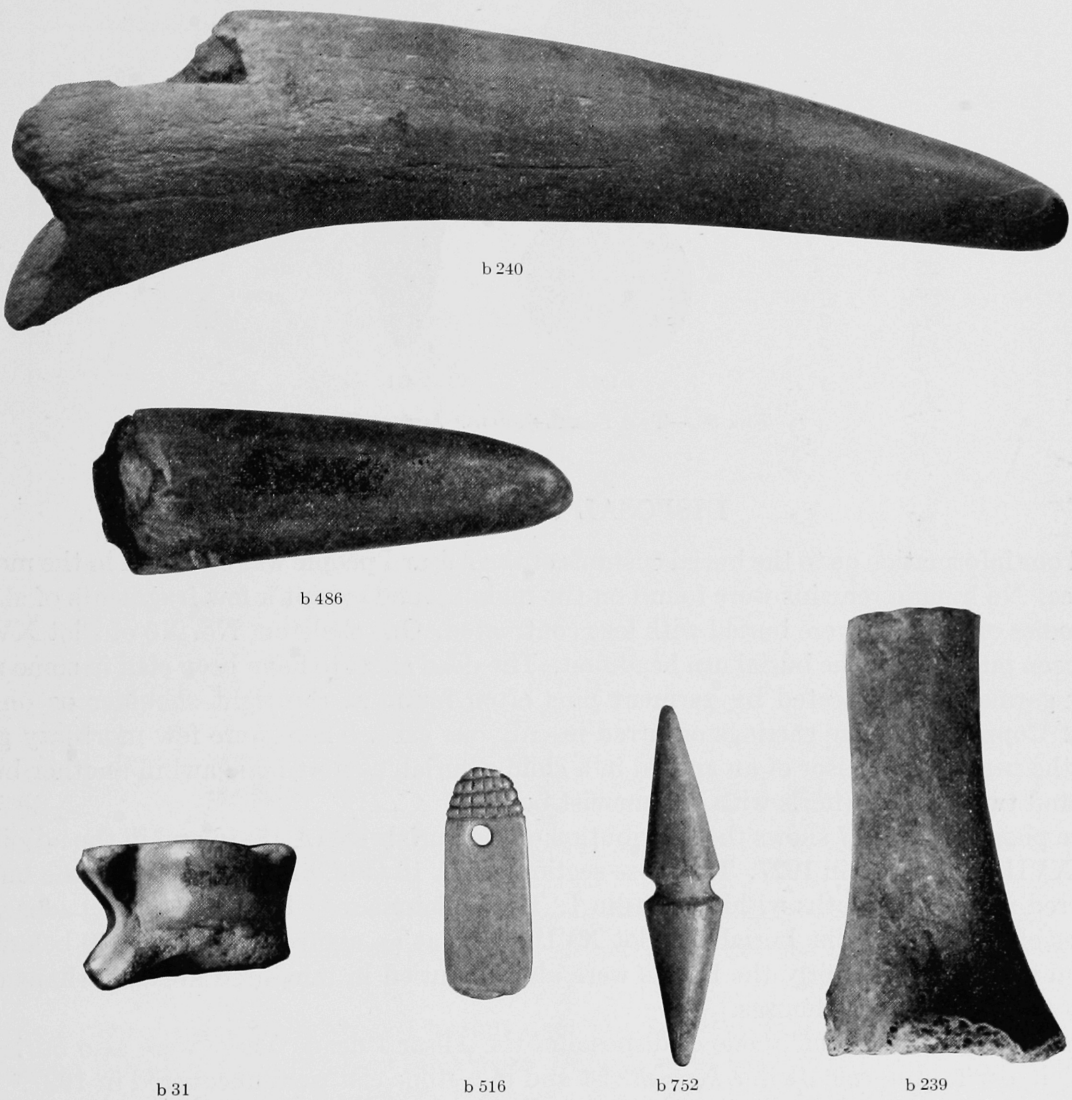

Fig. 85.—Miscellaneous Objects of Horn or Bone. Actual Size

Knucklebones of sheep, some perforated (e.g., b 31, Fig. 85) and some unperforated, were probably used by the ancient Anatolians for gambling, as they have been during all the succeeding periods and are today.

There were also a polished toggle-shaped object, No. b 752,[2] a small pendant(?) with ornamentation (b 516), and a cut-off piece of long bone (b 239), all shown in Figure 85.

[1] Or were these arrowheads? Cf. Petrie, *Royal Tombs* II 34–35 for ivory arrowheads of the 1st dynasty in Egypt.

[2] Cf. protodynastic Egyptian toggles. See Petrie, *Abydos*, Part II (London, 1903) frontispiece and Plate VIII 141–43.

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SHELLS

In contrast to the extraordinary frequency of shells in Stratum II, only two shells occurred in Stratum I, and both were fossils (Fig. 86). Shell b 431 has white and brown-red rings. Polished Shell b 1572 is gray and dark gray. Neither shell is perforated.

b 1572 b 431

FIG. 86.—TWO FOSSIL SHELLS. ACTUAL SIZE

DISPOSAL OF THE DEAD[1]

All our information as to the burial customs of the Alişar I people was obtained in the mound terrace. No human remains were found on the main mound except a few fragments of skulls. All bodies of Period I were buried with legs contracted. One skeleton, No. X6 of Plot XVIII, had been pushed into the burial urn head first. The dead seem to have been clad in some mortuary garment, as indicated by garment pins often found at the right shoulder or on the chest. Copper or bronze earrings occurred in only one case. There were few mortuary gifts: only the perforated incisor of an animal in a child's burial, a short bone awl in another burial urn, and two spindle whorls with a stone cist burial.

The plan in Figure 87 shows the distribution of the burials in AA 15–16 and in the adjoining Plot XVIII excavated in 1927. The cross-section of AA 16 (Fig. 87) indicates that the burials occurred at various depths within Stratum I. The skeletons may belong to widely separated phases of the period. The burials in Plot XVIII were at an average depth of 3.40 below the mound surface. Apparently the bodies were always buried in inhabited areas, perhaps even below the floors of their houses.

Urn burial was the usual mode of disposal of the Alişar I dead. There were also burials in the plain earth. Interments in a *kerpich* cist and in a stone cist were uncovered in 1927.[2] The urns used for the burial of adults seem to have been made for this purpose (cf. Fig. 54), while infants were sometimes buried in household vessels (cf. Fig. 53). Two large burial urns, those of X2 and X3 in Plot XVIII,[3] were modeled with "breasts." All the large vessels were closed with a heavy stone slab or with a covering of large stones.

The method of disposing of the dead in urns seems to have been widespread in the ancient

[1] By the courtesy of the Turkish government some of the skeletal remains were removed to the University of Chicago, where they have been studied. Others remain in charge of the Turkish government. These, as well as some remains which were too fragile to remove, were photographed and recorded in the field by Mr. Martin. Professor W. M. Krogman, of Western Reserve University, has made a careful study of all the data. His report will appear in *OIP* XX.

[2] See *OIP* VII 9–14.

[3] See *OIP* VII 17–19.

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Orient during the early culture phases. At Carchemish in Syria, according to Woolley,[1] urn burials with flexed skeletons occurred in the Neolithic layer. Olmstead[2] states that in Assur, during the rule of Ur, children were buried in covered vases, but adults directly in the earth. Lidded burial jars of clay, in addition to clay cists, were used in Crete[3] during the early Minoan Age. In connection with the Cretan burials Evans states that the contracted position was such that the bodies were apparently trussed before *rigor mortis* was in effect, and he mentions the possibility that the dying may have been forced to take a sitting posture.

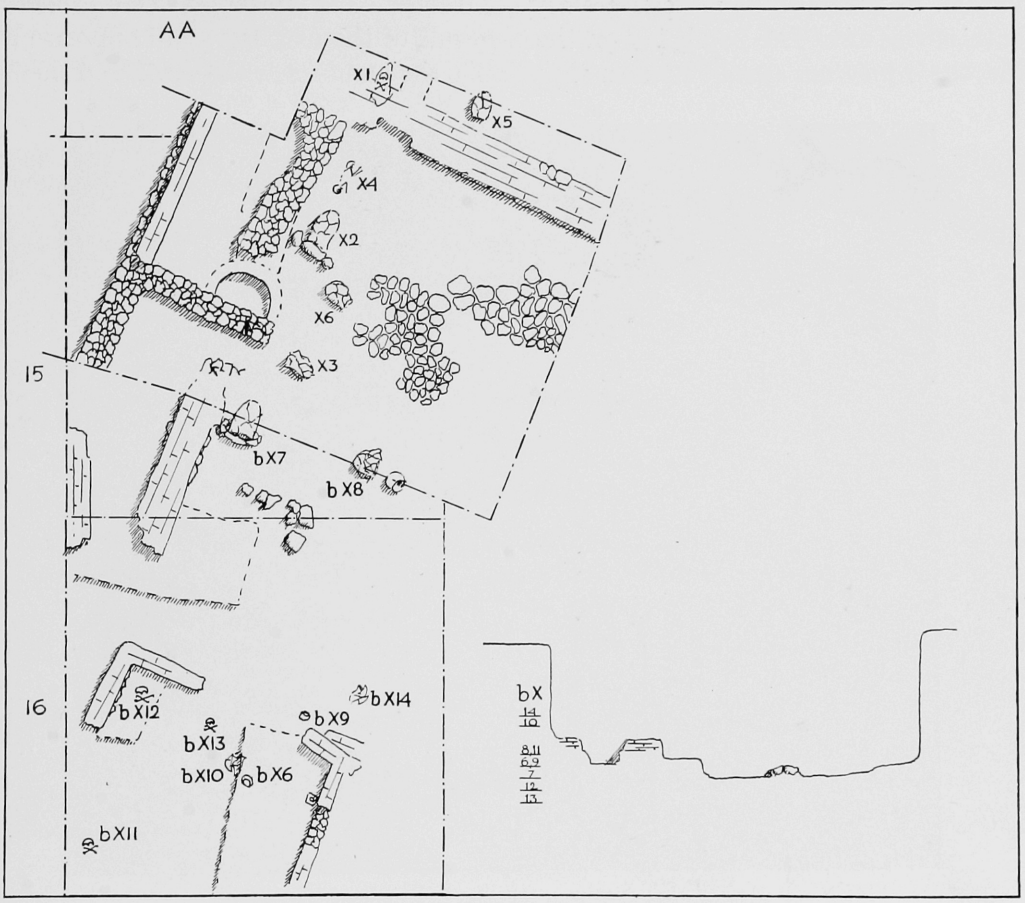

Fig. 87.—Plan of Burials in Plots XVIII (1927) and AA 15–16, with Cross-Section of Plot AA 16 Showing Levels of Burials. Scale, 1:200

During 1929 the following Alişar I burials were uncovered in Plots AA 15–16.[4]

Skeleton b X14, a child of about four years (infans I), of undetermined sex, was situated higher than most Stratum I burials in this plot. We could not determine whether the body had been placed in an urn or laid in the earth and covered with fragments of a large vessel. The skeleton lay on its left side, from northwest to southeast, the head being to the northwest. The right arm was slightly flexed, and the hand with extended fingers was in front of the trunk. The left arm was straight, with the hand at the right patella. Both legs were contracted; the feet were slightly below and in front of the pelvis. The preservation was poor; the cranium

[1] "Hittite Burial Customs," *LAAA* VI 88.

[2] *History of Assyria*, p. 25.

[3] Evans, *op. cit.* I 126.

[4] For a description of the burials found in the adjoining Plot XVIII in 1927 see *OIP* VII 17–21.

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very fragmentary, mandible broken, long bones cracked, and pelvis rather powdery. There were no mortuary gifts.

Skeleton b X10, of a mature person of undetermined sex, was at about the same level as b X14. The urn in which this skeleton was deposited lay with its mouth toward the southwest. The greater part of the urn was missing; fragments indicate a vessel about 1 meter long, .60 broad, and .015–.02 thick. The core of the paste is yellowish brown, the exterior reddish brown, and the interior grayish black. The position of the skeleton was doubtful on account of its poor preservation. It seems to have been greatly contracted. The vertebrae were arched toward the mouth of the urn. The pelvis lay on the east side of the urn, the skull opposite it on the west side; the *capitellum humeri* lay near the patella, the hands near the skull, and the feet near

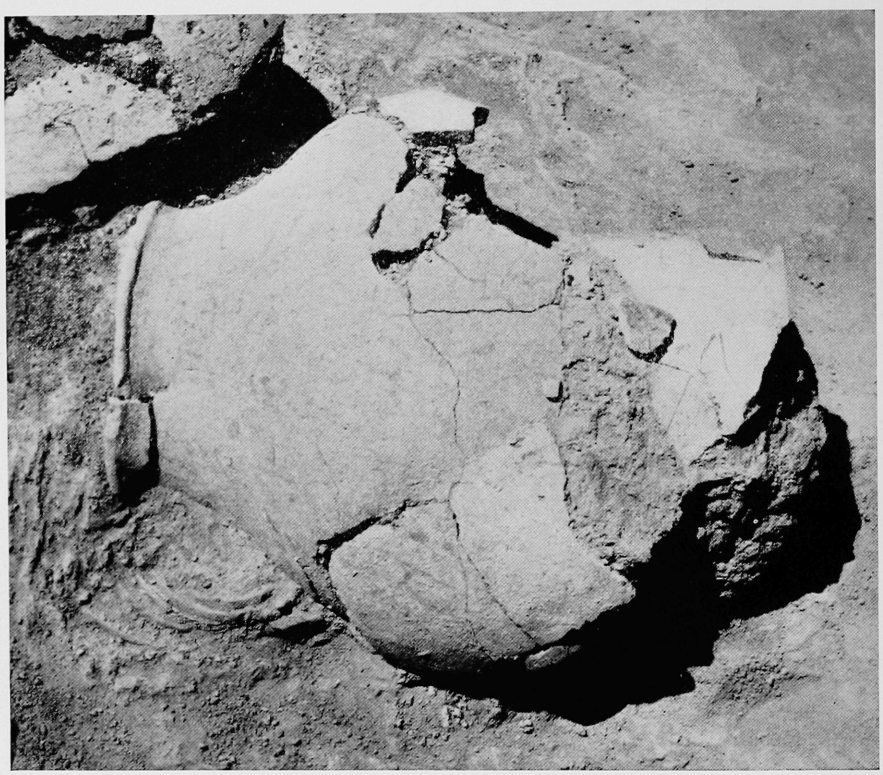

Fig. 88.—Burial Urn of Skeleton b X8 in Situ

the pelvis. The bones were almost powdered, but small fragments of nearly all the bones were identified, and the mandible was almost completely restored from scattered fragments. There were no mortuary gifts.

Skeleton b X8, that of an adult male (Figs. 88 and 89), was in a burial urn .20 below an Alişar I pavement. Characteristic Stratum I sherds were above the pavement and in the soil around the bones. The poorly fired urn was about .70 long. The diameter of the rim was about .40, of the body about .60; the wall was .015–.02 thick. The paste is coarse and shows plant and grit tempering; the exterior is reddish brown, the interior grayish black. When the burial was discovered, the rim fragment of the urn covered the cranium and the arms; the bottom section covered the feet; and the ribs, vertebrae, and pelvis were exposed. The skeleton lay on its right side in a horizontal plane. The direction of the spine was from north of west to south of east with the head to the west. Both legs were greatly flexed. The left arm was slightly contracted and extended in front of the body with the hand above the right patella. The right

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arm was flexed, the hand being at the right side of the face with fingers extended. This is probably the best preserved of all the Alişar I skeletons. Nearly all the bones were recovered, though many were badly broken. A curved copper or bronze pin lay beside the lower edge of the right side of the mandible, near the first molar. Both tooth and mandible were stained with copper oxide. When the cranium was removed, the pin was found to be a few millimeters from the right *caput humeri*. It was undoubtedly a garment pin clasped at the right shoulder.

Skeleton b X11, an adult of undetermined sex, was a little below the level of b X8. The body was apparently buried in the plain earth. The skeleton lay on its left side from northwest to southeast. The skull was missing. Both legs were flexed, the feet being below the pelvis. Only fragments of the pelvis, an occasional vertebra, and indications of the long bones of the legs remained. There were no mortuary gifts.

Fig. 89.—Skeleton b X8

Skeleton b X6, a newborn child (infans I), was at about the second level from the top of Stratum I, below the burial urn of b X10. The body was deposited in an upright urn (now broken) without a cover slab, but almost identical with the urn of b X9 (Urn b 653). The skeleton was lying on its left side at an angle of about 45°, the direction of the spinal column being from northwest to southeast. The legs were flexed. Poor preservation prevented the removal of the skeleton; many bones had disappeared entirely. There were no mortuary gifts.

Skeleton b X9 is that of a child less than a month old, with milk dentition erupting (infans I). It was found about the second level from the top of Stratum I, deposited in a small upright cooking-jar, No. b 653, without a cover slab (cf. p. 47). The skeleton lay on its left side; the legs were flexed. It was well preserved, and almost the entire skeleton was recovered.

Skeleton b X7, an adult of unidentified sex, was in an urn (Fig. 90) slightly below the floor of the second level from the top of Stratum I. The urn was somewhat cracked when found, but still maintained its original shape; it is about 1.30 high, the diameter of the rim about .60 and of the body about .75. It is of coarse paste, plant and grit tempered. The wall is .025–.03

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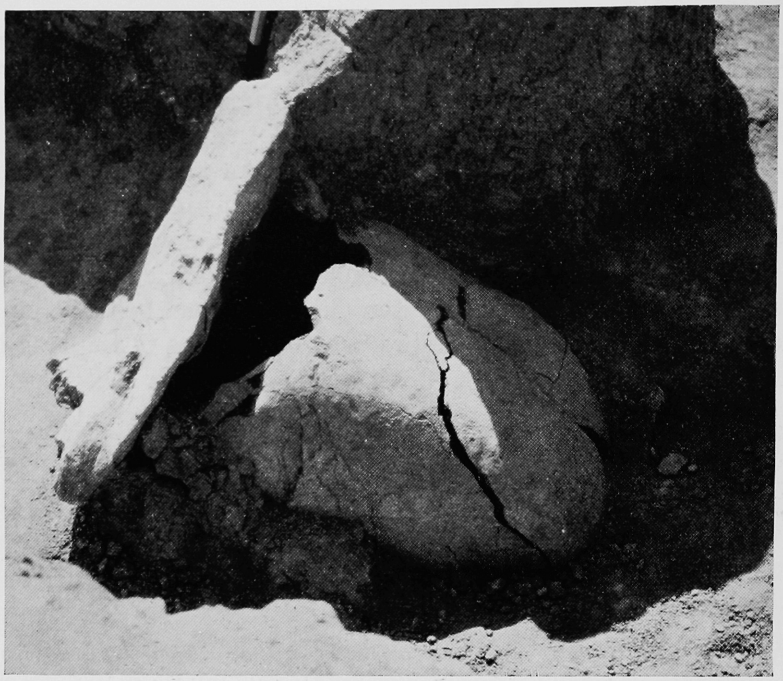

FIG. 90.—BURIAL URN OF SKELETON b X7, WITH COVER SLAB

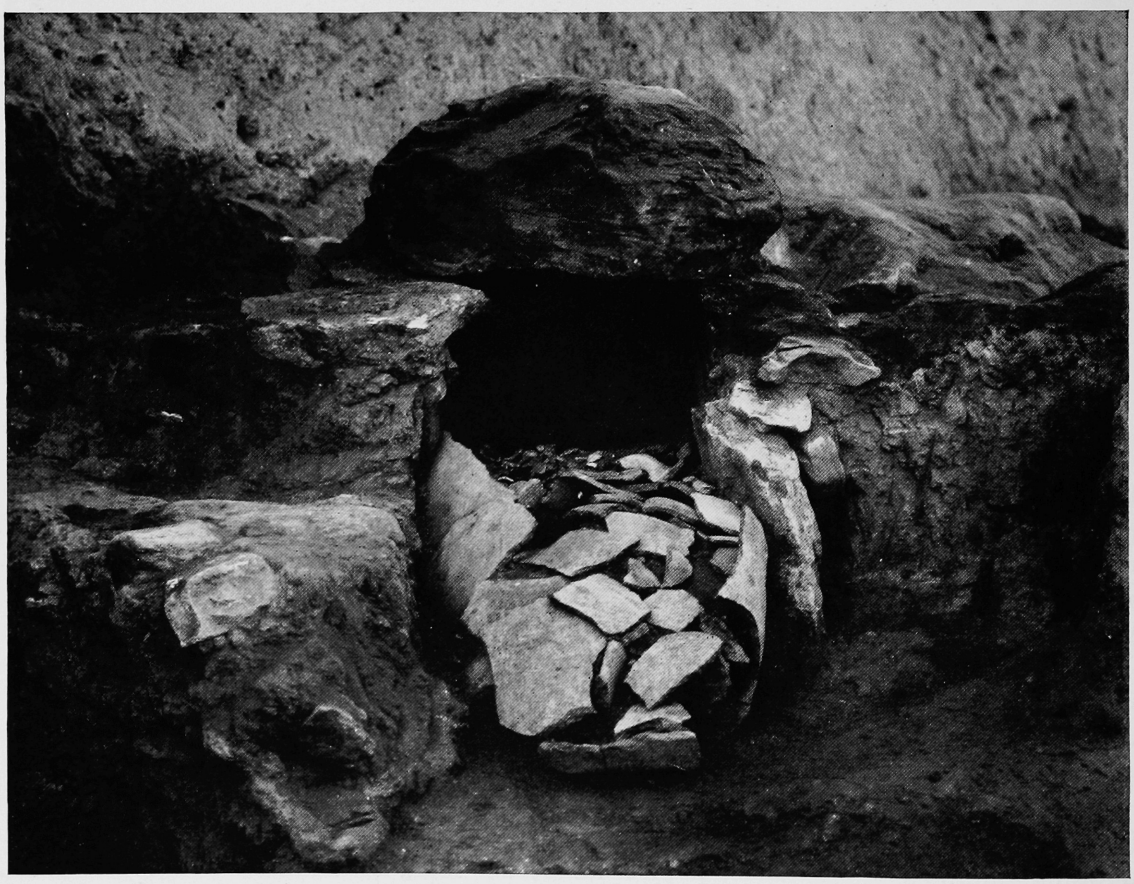

FIG. 91.—BURIAL URN OF SKELETON b X46, BOXED IN WITH SLABS, SEEN FROM EAST-NORTHEAST

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thick, of which .012–.015 is the grayish black core; the interior is grayish brown, the exterior reddish brown. The urn was tipped, its mouth toward the southwest. It was closed by a large slab, flat and smooth on both sides but of somewhat irregular shape (about .80×.90×.17). Ten small stones were arranged around the rim to complete the closing. The urn was empty except for a layer of earth about .07 deep containing skeletal remains. A few fragments of the broken rim had fallen on the skeleton. The position was dorsal. The skull was probably toward the southwest, although its position was uncertain since its fragments were scattered. The arms were slightly flexed, with the hands in front of the pelvis. The legs were flexed, and the feet were under the median line of the body and pointed toward the base of the urn. The bones were almost powdered. Of the skull, only small portions of the cranium and the upper right

Fig. 92.—Burial Urn of Skeleton b X68

canine tooth could be identified. A copper or bronze pin, No. b 976, was found .01 above the right *caput humeri*.

Skeleton b X12, an adult, was also found below the floor of the second level. The position of the skeleton could not be determined, since only the lower legs and feet were preserved. No mortuary gifts were found.

Skeleton b X13, perhaps of a child (infans II?), occurred at about the same depth. The direction was probably southwest to northeast. Only the lower legs and feet were found.

Two of the 1929 skeletons were found in other plots. Skeleton b X46, an adult male(?), was found in EE 10 at a depth of about 3.60, below remains of Alişar II. The mouth of the burial urn was boxed in with five slabs (Fig. 91) which were used as an integral part of a later wall. The central slab was about .80×.75×.40, and the smaller slabs were .25–.30 thick. The space between the rim of the urn and the slabs was about .30 high. The urn was tipped about 25°; its

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raised mouth opened toward the southwest. The vessel was .90 high, and the rim diameter was .50. Most of the upper side was in fragments. The skeleton lay on its right side. The cranium protruded about .20 beyond the mouth of the urn and rested on one of the slabs. Both legs and arms were flexed. The feet were below the pelvis, and the hands rested below the mandible. The pelvis and long bones were fragmentary, and the skull was in powdery bits. A copper or bronze pin (b 2653) lay at the left side of the mandible.

Skeleton b X68, an adult male, was found in DD 19 only slightly below Stratum II. The urn (Fig. 92), of rather thin light reddish brown ware, was unlike the other Stratum I burial urns. Therefore the skeleton may belong to Period II, although it was surrounded by Period I refuse. The urn was tipped about 25°, the raised mouth opening slightly west of south. The vessel was about .90 high and .60 wide at the rim. Five stones covered the mouth. The skeleton lay on its right side, the skull slightly east of south. Both legs and arms were flexed. The knees were opposite the shoulders; the hands were in front of the face. All the long bones and the cranium were fragmentary. A copper or bronze pin (b 2652) was near the right scapula.

No burial has been found older than one uncovered in 1927 in a storage or refuse pit dug below the original ground surface.[1]

In addition to the skeletons, two mandibles of adults were found in the refuse of Plots L 14–15.

[1] See *OIP* VII 7–9.

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V

STRATUM II

Stratum II of Alişar contains material essentially different from that of Stratum I. It appears to coincide with the final phase of Period I, to overlap with Period III, and to end sometime during Period III.[1]

Stratum II, like all the other strata of the mound, was first defined by the pottery;[2] but other objects later amplified and checked our conclusions. Stratum II was extremely fertile in types of objects which occur in other layers also (cf. p. 30, n. 3), and in addition it gave us a great deal of material rare or not found at all in the other strata.

From the archeological remains we gain the impression that the people lived in closely organized households. It is thought that they were commercial rather than agricultural. However, domestic animals were well known. We know from pottery figurines (cf. Figs. 165–66 and 171) that they had the ox and buffalo as we know them today; these animals may have been indigenous in Asia Minor. Great numbers of pottery and clay figurines of sheep, rams, hogs, and goats also appeared in Stratum II. It is probable that the horse was known in Anatolia before Period II. But the cart, together with the use of the wheel in general, was apparently imported by the Alişar II people.

Their buildings, constructed of *kerpich* with or without stone foundations, were far superior to those of Stratum I. Their "storehouse" was the strongest construction found at the Alişar mound, except for the Alişar IV and V fortifications. We do not yet have sufficient information about Period III buildings to compare them. Fortifications of the Period II town have not been discovered, but the clayey stratified soil outside the eastern wall of Plot I of 1927[3] (in HH–II 13) suggests that there may have been a moat on that side.

The superiority of the Period II people over the native population is emphasized in nearly every feature of their material remains. By means of their advanced wheel technique, and aided by their artistic sense, they were able to produce extremely graceful pottery vessels.

They showed great ability as sculptors, leaving us numerous anthropomorphic figurines of pottery, clay, ivory, and lead. A number of pottery figurines of women with pronounced sex characteristics and the lead Figurine b 1445 (cf. Fig. 157) were presumably idols representing the goddess of fertility. Many zoömorphic pottery figurines show even finer modeling.

Some of the cylinder seals and stamp seals are witnesses of the high development of the stonecutter's art. The greatest advance during Period II was the introduction of cuneiform writing, found on clay tablets. The language is Early Assyrian. Non-Semitic names appearing in the tablets are apparently those of the indigenes. The "Cappadocian tablets" found at Kül

[1] [On the chronological order which now seems more likely, cf. p. viii, n. 1.—Editor.]

[2] Laboratory work in 1928 showed an interesting resemblance between Alişar II vessels and vessels associated with the "Cappadocian colony" of Kül Tepe as illustrated by Henri de Genouillac in *Céramique cappadocienne* I 49 f. Fragments illustrated in *Mission en Cappadoce* by Ernest Chantre and in Hrozný's "Rapport préliminaire sur les fouilles tchécoslovaques du Kultépé," *Syria* VIII (1927), also point to a similarity between Alişar II and Kül Tepe. A visit of the writer to the "tablet field" of Kül Tepe in 1929 confirmed this resemblance. The absence of Stratum II from Mound A and its western spurs furnished another parallel to the situation at Kül Tepe, where the "Cappadocian colony" was wholly apart from the mound. The writer then concluded that the Alişar II people were Mesopotamian merchants; cf. *OIC* No. 11, p. 70.

Some potsherds from Boğaz Köy (now in the collection of Th. Makridi Bey in the museum at İstanbul) also resemble closely the Alişar II pottery.

[3] See *OIP* VI 120.

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Tepe[1] are more or less fired, whereas the two tablet fragments found at Alişar are frail and unbaked. Alişar is the second site[2] at which cuneiform records of the time of Alişar II have been discovered. We may hope for many more such documents from Alişar as excavation progresses[3] and also from a number of towns of this period, mentioned in the Kül Tepe texts, which may some day be located by means of Alişar II guide objects.

Daggers and lance blades of copper or bronze from Stratum II belong to the best specimens of their kind found at the Alişar mound. Pins with glazed frit heads, the needle of copper or bronze, the sickle, points, and celts with sockets appear for the first time in Stratum II. The Kül Tepe texts tell us that payments were made in gold and silver in the form of chains of definite weight. Lead was perhaps used as small change; and the occurrence at Alişar in Stratum II and Stratum III of many small lead rings, sometimes two or three linked together, points definitely toward their use in the same manner as the gold and silver chains.

In no other stratum of the mound were such great numbers of bone objects found as in Stratum II. There were many neatly ornamented small bone boxes; slips, used perhaps as ornaments for furniture; awls; pin heads; and the like. Few beads or other ornaments have been found, but there was an exceptionally large number of shells.

The Period II people did not excel particularly in the making of spindle whorls or stone tools, though some unique specimens occur. As a matter of fact, Period I and Period III stone tools are rather frequent in Stratum II, especially mace heads, hatchets, and flake knives, as well as such universal types of objects as hand mills, grinders, pestles, celts, and polishing-stones.

As in Period I, the dead were buried in urns or in plain earth. Thus far we have found urn burials in these two strata only. There are, however, some significant distinctions. First of all, the dead of Period II were frequently accompanied by mortuary vessels. Some of our most beautiful pottery came from burials. In addition to single-urn burials, there were also double-urn disposals, the urns being arranged mouth to mouth. A burial chamber with sixteen probably related individuals was found in a building of Complex I. A study of the Period II skulls and their comparison with the series of Period I specimens showed a distinct racial difference between the two groups, checking and paralleling the archeological conclusions.[4]

THE SETTLEMENT

The Period II settlement seems to have been in the form of a crescent 500 meters long, lying to the east and south of the Period III town on the main mound (Fig. 93). So much we have learned from our test squares, but of course the exact plan of the settlement can be determined only by complete excavation. It appears that Stratum II was most extensive during its earliest occupational level (Level 2), being then about three times as large as the Period III town. The later occupational level (Level 1) was smaller, covering only a strip 60 meters wide along the present eastern and southern mound edge; even this was larger than the Period III town.

The portion of Stratum II lying just below the surface along the edge of the terrace was composed of both occupational levels (cf. Fig. 95) and had an average depth of 3 meters. Nearer to the main mound, where the upper level disappears, the lower level (Level 2) has an aver-

[1] For a general compilation of our present knowledge and a bibliography concerning the Cappadocian tablets see Julius Lewy, "Kappadokische Tontafeln," *Reallexikon der Vorgeschichte;* also Lewy, " 'Kappadokische' Tontafeln und Frühgeschichte Assyriens und Kleinasiens," *OLZ* XXIX (1926) 750–61, and "Lykier-Syrer und Choriter-Syrer," *ZA* N.F. I (1924) 144–48; B. Landsberger, "Über die Völker Vorderasiens im dritten Jahrtausend," *ibid.* 213–38, and *Assyrische Handelskolonien in Kleinasien aus dem dritten Jahrtausend,* "Der Alte Orient" XXIV, Heft 4 (1925); F. J. Stephens, *Studies of the Cuneiform Tablets from Cappadocia* (1926); Sidney Smith, *Early History of Assyria,* pp. 146 ff.; A. T. Olmstead, *A History of Assyria,* p. 27; G. Contenau, *Trente tablettes cappadociennes.*

[2] If we except a fragment of a Cappadocian tablet found at Boğaz Köy.

[3] More were found there in 1930. They will be described in later reports.

[4] Cf. p. 72, n. 1.

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age thickness of 1 meter and is buried under 3 meters of later deposits. Plots XIV and XV of 1927 (in W–Y 14–15) present a curious situation.[1] There, immediately below Stratum II, we struck the original ground surface instead of the usual Period I deposit; and, though these plots are near the main mound, Stratum II was there as thick as at the mound edge—3 meters. It seems probable that we have here as many occupational levels as are represented in the equally thick strip farther to the east.

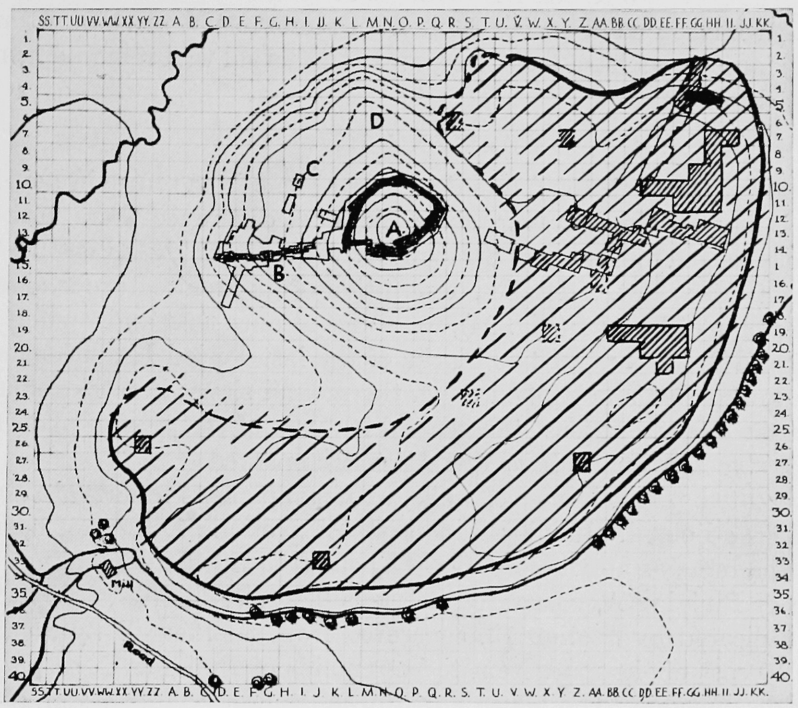

Fig. 93.—Settlement Plan of Alişar II

ARCHITECTURE

In 1929 we concentrated our work on Stratum II. The individual test plots gave little information concerning Period II architecture; but in the extensive Complexes I and II we obtained a fairly good idea of the types of buildings, the arrangement of rooms, the general plan of the settlement, and other features. In addition we have evidence that all the structures uncovered in Plots I–VI of 1927 (DD–II 12–13), except for the superimposed Osmanli remains, belong to Stratum II, as well as the buildings in Plots XXIV–XXVI of 1927 (FF–GG 2–5) below the level of the Period V city wall.[2] The test plots in the southern part of the terrace and the wide distribution of Period II potsherds over the terrace surface suggest that there may be equally important buildings in that almost untouched area.

Stratum II lay close to the surface in Complex I and Complex II. Great numbers of Period II specimens, such as vessels and sherds, "cakes," "stars," and "handles" of clay, and bone pins and points, appeared as soon as the thin film of dark surface dirt was broken. Below, there was a layer of light grayish white and yellow soil which was almost identical with the top soil of the original surface as found in Plots XIV and XV in 1927 (cf. Fig. 377), where we penetrated to the mound base. This layer, averaging about .50 thick and fading toward the mound edge, was well marked off from the darker refuse soil above and below. At first we assumed that this

[1] See *OIP* VI 149–54.

[2] *OIP* VI 180–86, 191–94.

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soil was roofing material from the crumbled structures; but its straight bottom line indicates that it was deposited on the mound surface after the Period II occupation, at a time when one of the Period II walls was still protruding somewhat above the surface. Was this light-colored soil an earth wall of Period IV or later—perhaps the foundation of a fortification of which the stones were carried away by later settlers? So far, we have traced this sterile layer along the mound edge from Plot FF 4 (XXIV of 1927) to Plot Q 33.

Below this sterile layer we struck the Stratum II refuse deposit of broken-down walls and roofing material, which in some places formed an almost solid mass of *kerpich*. Excavation became difficult, for it was a hard task to separate the actual wall remains from the refuse soil of similar composition.

COMPLEX I, LEVEL 1

The first cuneiform tablet (b 1600) found at Alişar came from refuse in Level 1 of Complex I in Plot HH 9. It is possible, however, since the level difference there was slight, that the tablet may have belonged to Level 2 of Stratum II. Since Complex I (Figs. 94–95) is important as the find-area of this tablet, a detailed description of its architecture is given.

Looking at the plan of Level 1 (Fig. 94), we notice at once that an irregular passage or road (Sections 18, 2, and 21) separated two blocks of the last Period II settlement. Much of the eastern part had crumbled and slipped down the mound slope; but the remains of buildings west of the passage gave us at least the general features of the ground plan, although in this section too some structural parts have doubtless disappeared.

West of the road two parallel series of walls, with no openings to indicate doorways, showed that two buildings adjoined. Building A consists of Sections 1, 3, 4, 5, 6, and 10; perhaps Section 20 and the remains north of Section 10 belong to the same building. Building B, the structure south of Building A, comprised Sections 9, 11, 7, 15, 16, and 17. The corner of a third house is indicated by Section 13, separated from Building B by Sections 12 and 14. Sections 8 and 19 east of the road seem to be remains of Building C, a structure which has almost entirely disappeared. The house north of it, Building D, containing Sections 22, 23, and perhaps 24, is somewhat better preserved.

Even before the preserved wall tops of Building A were struck in Plot GG 10, the tops of storage jars appeared. We found more and more vessels, until finally we had uncovered thirty-one large and small pots (storage jars, jugs, pitchers, and bowls). This was by far the greatest number of vessels found within one plot and level at Alişar. Relatively small, round-bodied jars, some of them blackened by soot and grouped around a fireplace (Fig. 96), marked Section 4 as kitchen or living-room, depending on the habits of these people. Large stationary storage jars (Figs. 96–97), with rather small bases sunk into the floor, indicated that Section 1 was a storeroom.

There were eleven definite storage jars, nine of them large, out of twenty-one pots found in Section 1. Five large jars bordered Section 2, which does not seem to have been separated by a wall from either Sections 1 and 4 or Section 3. Does this mean that Section 1 was an open bazaar? Pot 5 (Fig. 96) was split in two, one half lying in Section 2. A second row of storage jars, Nos. 6–10, once stood behind Pots 1–5, though when they were uncovered nearly all the pots of this second row were lying on the floor and badly broken. Only Pot 10, which had been sunk into the floor to about one-half its height, stood upright. The remaining pots were small and of various shapes (cf. pottery description).

The walls of Building A were surprisingly weak if it was used as a storehouse. In Section 1 only the stone foundations were preserved; for the most part they consisted of but one or two

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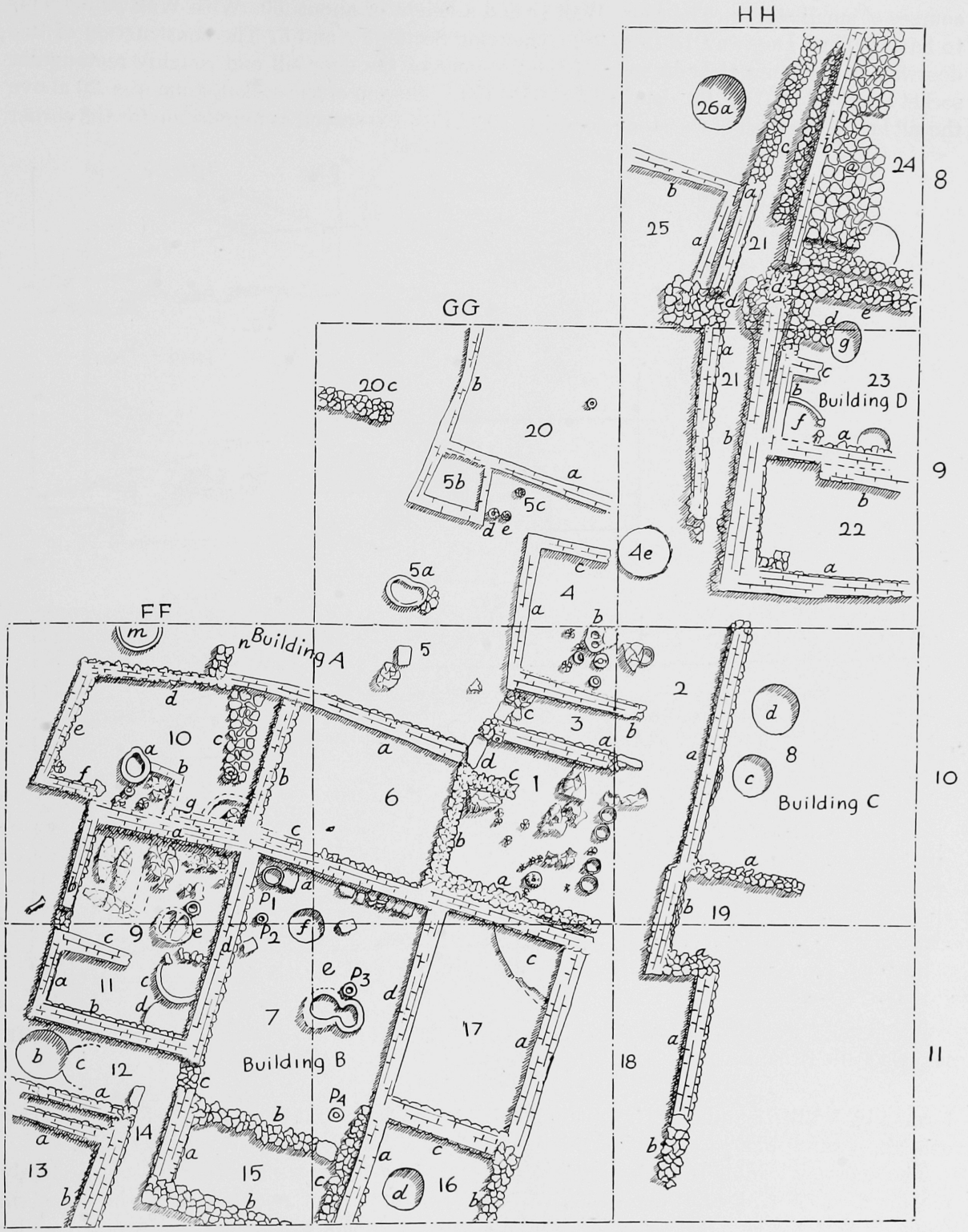

Fig. 94.—Plan of Complex I, Level 1. Scale, 1:200

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courses of small stones. The short Wall 1*c* had a height of about .50. With Wall 3*a* it seems to have flanked Doorway 1*d* (Fig. 98) connecting Sections 1 and 5. The construction of this doorway is not quite clear in spite of the presence of the door sill and roughly rectangular socket stone (.25×.17×.08, depression .065×.03).[1] The top of the socket stone was .20 above the sill level. One half of the stone door sill (.95×.45×.15) served as foundation for the corner

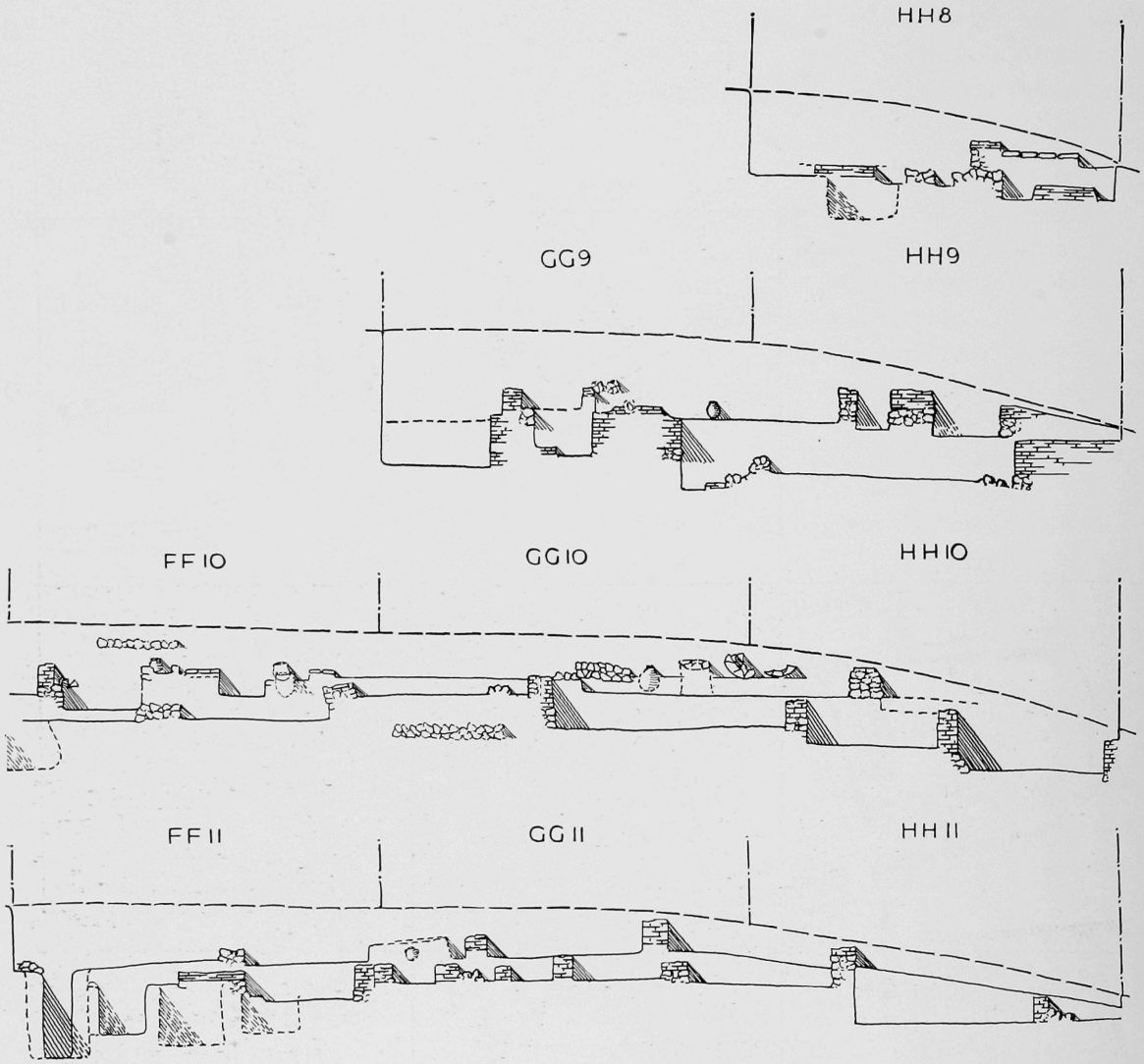

Fig. 95.—West-East Cross-Sections of Complex I on the Middle Lines of Plots HH 8, GG–HH 9, FF–HH 10, and FF–HH 11. Scale, 1:200

formed by Walls 1*b* and 6*a*. The opening between Walls 3*a* and 6*a* was, therefore, just large enough to admit one person at a time. The door must have opened toward Section 1.

The doorway leading from Section 3 into Section 5 was clearer. The socket stone (roughly rectangular, .23×.24×.06; depression .06×.02) was somewhat set back from the stone sill (roughly rectangular, .65×.55×.08), and its top was about .10 above it. Several smaller stones filled the gap between the sill and the corner of Walls 4*a* and 3*b*. These stones may have been the foundation for a short *kerpich* wall, which would decrease the width of this doorway

[1] The socket stones of Stratum II buildings are not distinct from those of other strata (cf. p. 30, n. 3).

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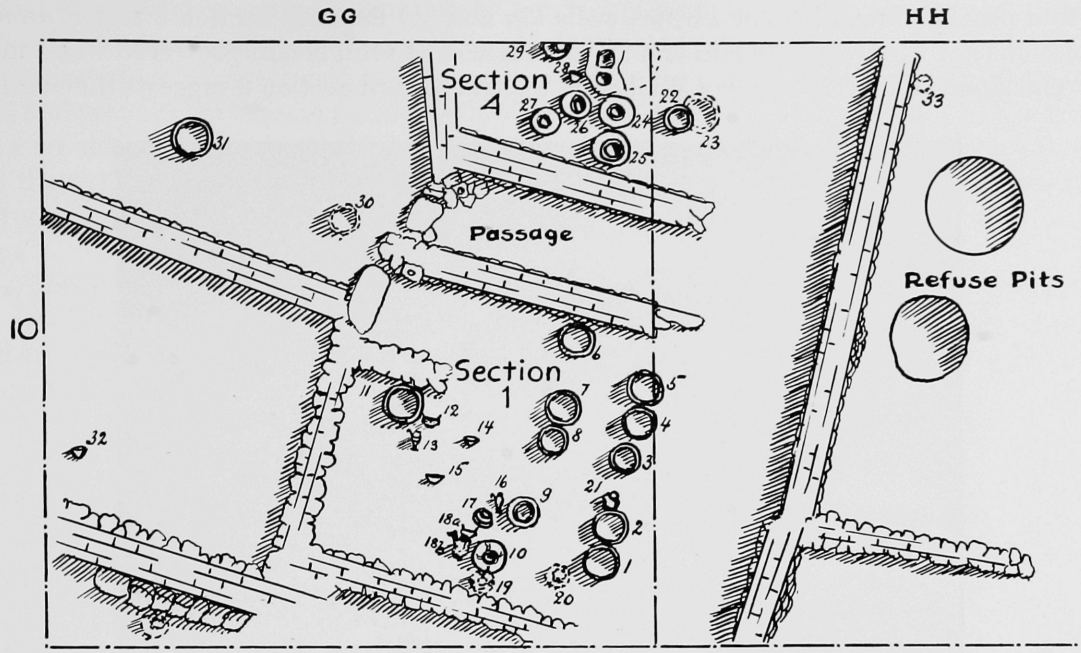

FIG. 96.—ARRANGEMENT OF POTTERY VESSELS IN THE STOREROOM, KITCHEN, ETC., IN LEVEL 1 OF COMPLEX I. SCALE, 1:125

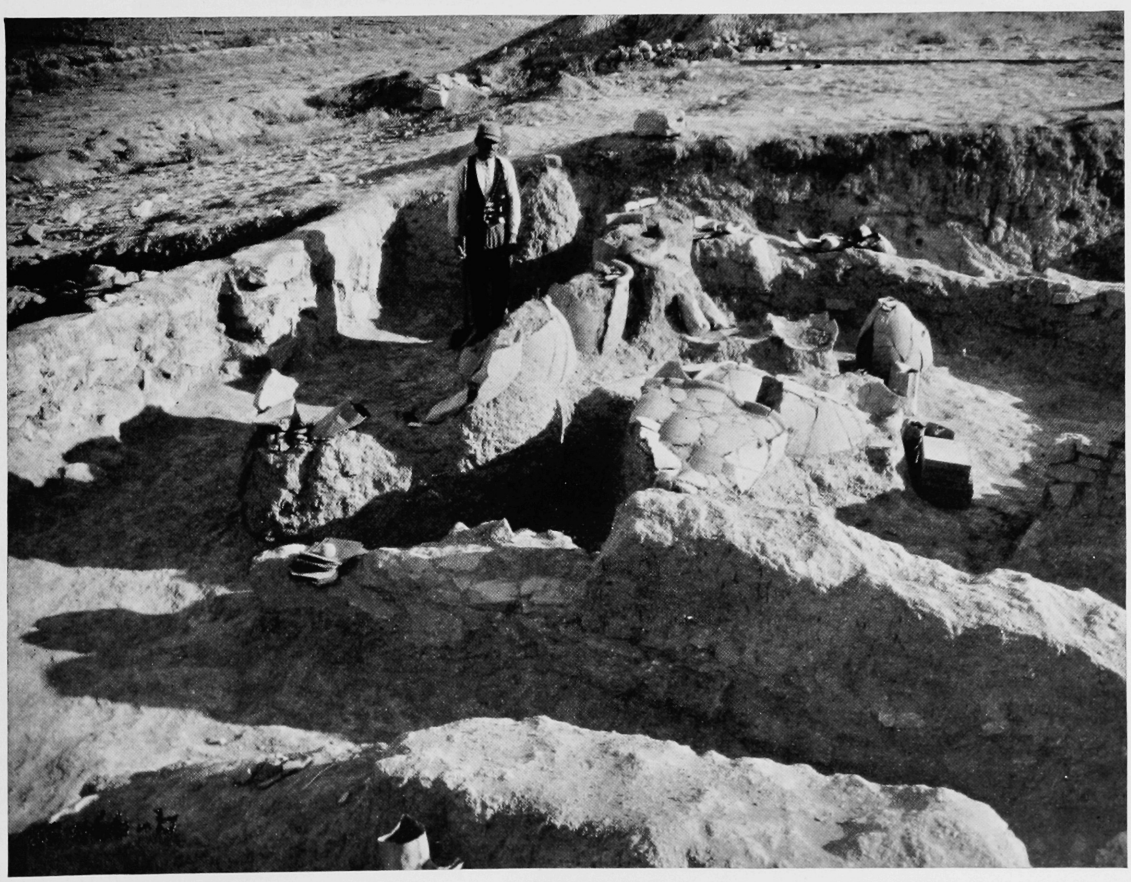

FIG. 97.—STORAGE VESSELS IN SECTION 1 OF COMPLEX I, FROM THE NORTH

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also to a person's breadth. The *kerpich* walls (3*a* and 3*b*) flanking Section 3 rested on stone foundations not very regularly laid and .35–.50 high. The total height preserved was 1 meter. The "end stone" (.80×.25×.20) of Wall 3*a* at the end toward Section 2 suggests that Walls 3*a*

FIG. 98.—DOORWAY 1*d* OF LEVEL 1, WITH SOCKET STONE, FROM THE EAST

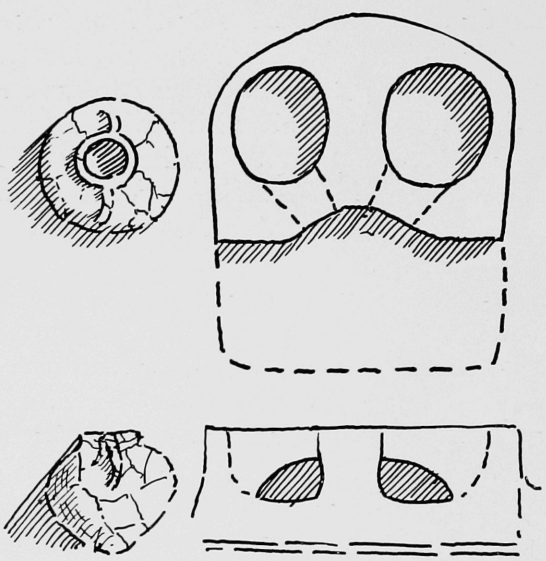

FIG. 99.—FIREPLACE 4*b* IN LEVEL 1 OF COMPLEX I. SCALE, 1:20

and 3*b* actually ended at that point, i.e., that Section 3 was open toward Section 2 just as Sections 1 and 4 seem to have been.

Section 4 was interesting on account of the arrangement of cooking-vessels and other pots (perhaps for kitchen supplies) grouped around a typical Period II fireplace, No. 4*b* (Fig. 99; cf. Fig. 110), made of *kerpich* with plaster coating. The plaster was blackened by soot, and the *kerpich* had been burned hard and red-brown. There were two cooking-holes, each with an

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opening toward the outside for feeding the fire and furnishing a draft. In front were the remains of a plastered patch. Three vessels of identical form (Nos. 24, 25, and 26 in Fig. 96), standing south of the fireplace, had rather large broad oval bodies, two vertical handles at the sides, and pointed bottoms blackened by use over the fireholes. Storage pot No. 22 lay directly above an older storage vessel (No. 23) the rim of which must have been somewhat below the hard floor. Here and in other rooms of Complex I the floor layer was marked at the walls of the rooms and of the plot by dark colored stratification formed by accumulated refuse and ashes.

Kerpich Walls 4*c* and 4*a* had no stone foundations. Wall 4*c* ended at a circular fireplace (4*e*, Fig. 100) which had an odd position, suggesting that it had been built at a later date than Wall 4*c*. Its level, however, was the same as that of Fireplace 4*b*. Rim fragments of large stor-

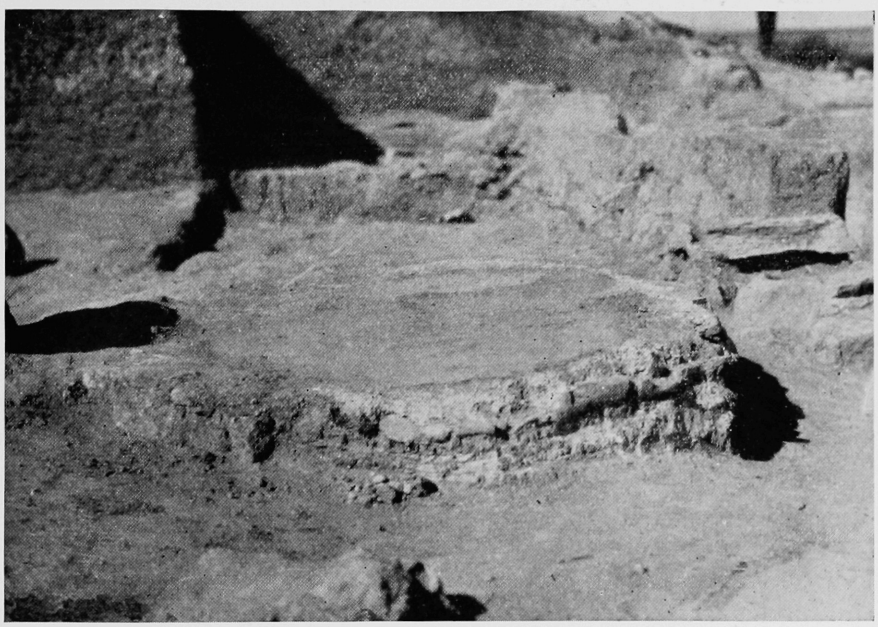

FIG. 100.—CIRCULAR FIREPLACE 4*e* IN LEVEL 1 OF COMPLEX I

age vessels bordered its plastered top. Wall 4*a*, made of unusually light-colored bricks, separated Section 4 from Section 5.

The northern portion of Section 5 remained problematical. A somewhat heart-shaped fireplace (5*a* in Fig. 94), plastered, was inclosed by a thin *kerpich* wall. Some loose rocks lay at its eastern side. Near by were some bone slips ornamented with incised circles and cross-hatchings, such as had appeared in larger numbers in the southern part of the room. A small, poorly defined inclosure (5*b*) was bordered by thin *kerpich* walls, the western one being continued by Wall 20*b*. Wall 20*a*, with its preserved top below the bases of these low *kerpich* walls, and Pot 5*c*, a small storage jar containing a pitcher, may have belonged to a lower sublevel. Cooking-jars 5*d* and 5*e* stood about .60 higher than 5*c*, level with Fireplace 5*a* and the short Wall 20*c*. The latter was only one layer of stones high. In the southern part of Section 5 we found two more storage vessels (Nos. 30 and 31 in Fig. 96). Pot 31 was ornamented with two dotted lines encircling its center. A large rock (.65×.45×.30) lay beside it and a little below.

In excavating Section 6, we had found that the base of the stone foundation of Wall 6*a* was .50 below that of Wall 7*a*. It seemed that the floor of Section 5, on the other side of Wall 6*a*,

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might be lower than the floor of Section 6. Accordingly, a portion of Section 5 was excavated .50 lower than Section 6; it was found that the floor stratification of the two rooms was on the same level.

On the floor of Section 6, parallel with Wall 1*b*, two wall tops were marked by parallel lines and discolored dirt. These older wall tops abutted another wall thus marked and extending parallel to Wall 7*a*. They were walls of Level 2, the tops of which had been leveled off during the construction of the Level 1 building (cf. p. 97). In Section 6 only one small Period II bowl (No. 32 in Fig. 96) was found.

While Stratum II lay just below the surface along the eastern border of the mound, in Plot GG 10 and in the eastern part of Plot FF 10 there was an upper layer of light-colored dirt. Over the remaining area of Plot FF 10 there was a thin layer of Period IV remains. A shallow bin (*m*) and a wall fragment (*n*) belonged to this layer; but even here Period II sherds were common. A little below this level (about .70 deep) the wall tops of the upper Period II level were struck. Again there was difficulty in digging in the hard-packed deposit of crumbled *kerpich*. In Plot FF 10, as in Plots GG 10 and HH 10, the higher parts of the walls of Level 1 were badly constructed and not very well defined.

Section 10 was separated from Room 6 by Wall 6*b*, on which only traces of *kerpich* were preserved. Some *kerpich* was preserved on Walls 10*e* and 10*f*, as well as on Wall 9*a;* and there is no doubt that the other wall remains also were foundations for *kerpich*. The foundations averaged .50 in height and were built of flat slabs of various sizes, the largest measuring .50 in length. None of the *kerpich* layers on top was preserved to a greater height than .70. The situation at the south side of the room was somewhat complicated. Wall 10*f* apparently had once been connected with Wall 10*g;* but the *kerpich* was now discontinuous, and fragmentary vessels lay in the space between the wall ends. Wall 9*a* runs parallel to these two wall sections.

A series of vessels grouped about Fireplace 10*a*, and standing in the southwest and southeast corners and on a rather irregularly paved patch (10*c*), indicated the use of Section 10 as a kitchen such as Section 4. Fireplace 10*a* was roughly oval. The bottom was plastered with a *kerpich* layer .015 thick; the *kerpich* bricks .15 high inclosing it had been burned reddish brown. The storage vessel in the southeast corner (cf. Fig. 94) apparently was sunk into the floor and was inclosed by a narrow *kerpich* wall. Wall 10*b* partly inclosed those vessels standing near Fireplace 10*a*.

Section 9 of Building B was the most interesting inclosure excavated in Complex I. It was bordered by rather well built and well preserved *kerpich* walls, with doors connecting it with the rooms to the west and south. First a series of household vessels (storage jars and smaller pots), suggesting its use as a kitchen or living-room, appeared above the floor level, flush with Fireplaces 9*e* and 11*c* (cf. Fig. 94). But in a sublevel below the bases of the stone foundations a burial chamber of the upper Period II level was uncovered. A series of large burial urns—storage jars, as a matter of fact— contained skeletons with beautiful Period II vessels as mortuary gifts (cf. pp. 182 ff.).

Walls 9*a*, 9*b*, and 9*d* had foundations averaging .35; Wall 9*c* had no stone foundation. The *kerpich* was 1.10 high in places. The northern face of Wall 9*a* apparently had been patched with stones, or a former opening had been walled up. The doorway cut through Wall 9*b* was .80 wide, its stone sill raised .20 above the top of the foundation. Traces of whitewash were noticed on Wall 9*d*. Fireplace 9*e* (Figs. 101–2) was oddly shaped. It looked like a large basket, the bottom paved with a coat of *kerpich*, the "handle" and the sides made of thin *kerpich* walls. The perforation through the "handle" was .40 wide and .30 high.

A narrow inclosure, Section 11, may have had a use as an annex of the burial chamber, though the broad opening in Wall 9*c* may in part be due to the later construction of Fireplace

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11*c*. The original fireplace (11*d* in Fig. 94) was simply a *kerpich*-paved patch on which the later fireplace was superimposed .60 above. The second fireplace (11*c*) was roughly circular, paved with a hardened coat of *kerpich* and inclosed by fire-reddened *kerpich* bricks and stones. The opening at the northern end was flanked by two stones .30 high.

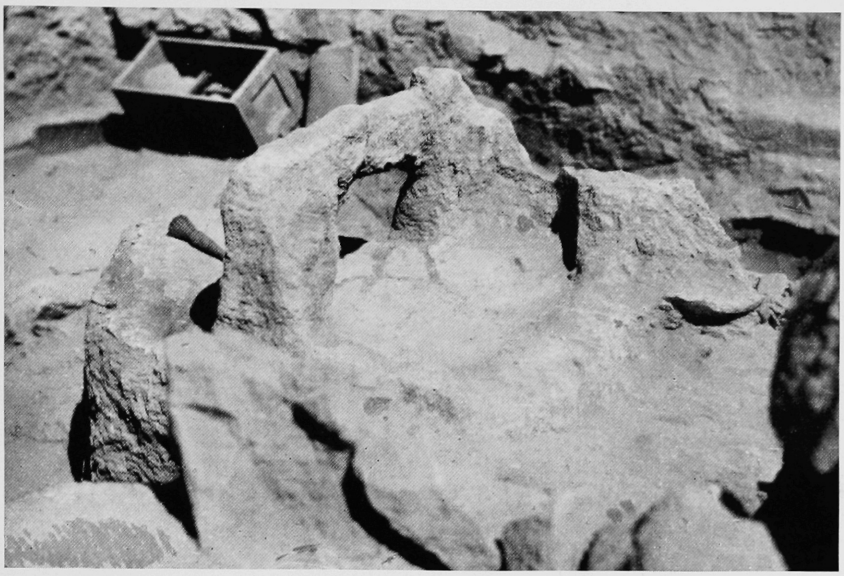

FIG. 101.—BASKET-SHAPED FIREPLACE 9*e* IN LEVEL 1 OF COMPLEX I

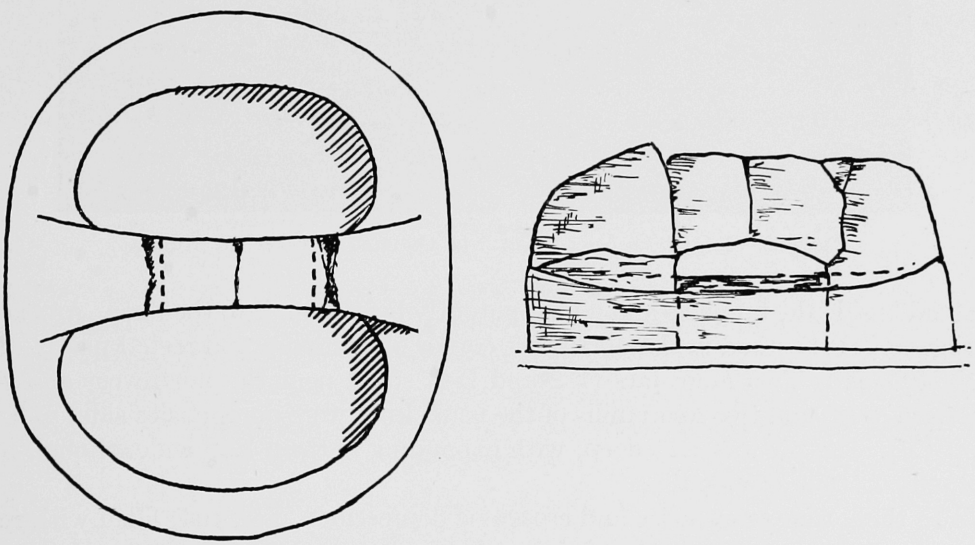

FIG. 102.—DRAWING OF FIREPLACE 9*e* IN LEVEL 1 OF COMPLEX I. SCALE, 1:20

Wall 11*a* had a stone foundation .35 high separated from another layer of small flat slabs (.15 high) by one well marked course of *kerpich*. The other walls were normal and preserved to an average height of .80.

Section 12 and Section 14 separated Building B from Section 13; this room, inclosed by the double Walls 12*a* and 13*a* abutting the broad Wall 13*b*, was probably a corner of another building. Only the stone foundations (.30 high) of Walls 12*a* and 13*a* were preserved, while a thin layer of *kerpich* was found on Wall 13*b*. A large stone of problematical purpose protruded

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into Section 12. A tubular refuse or storage pit (12*b*) extended downward 2.25 from the floor of Section 12 and was connected with a second, somewhat shallower, pit (12*c*) the mouth of which was not marked on the floor.

Section 14 was connected with Section 7 by a doorway (7*c*) marked simply by lack of *kerpich* above the stone foundation. Section 7 was the largest in Complex I. Its inner space measured about 5.80×8.20. There was a fireplace or altar(?) (7*e*, Fig. 103) in a central position, paved as usual and consisting of two roughly circular sections. One section was inclosed by a low thin *kerpich* wall; no traces of an inclosure could be seen on the other. On top of this open part of the fireplace we found a disk with the "Cappadocian symbol" (b 1529; cf. Fig. 184), a bird head (b 1528; cf. Fig. 169), and a small bowl (b 1466; cf. Fig. 124) with an oxhead spout, which looks more like a libation vessel than a utilitarian pot. A stationary storage jar (P 3 in

FIG. 103.—FIREPLACE 7*e* IN LEVEL 1 OF COMPLEX I, FROM THE NORTH

Fig. 94) stood beside the fireplace and had apparently been sunk into the floor. An exceedingly large storage pot (P 1) stood in the northwest corner of the room and rested partly on a stone slab (.90×.80×.20). Two more jars (P 2 and P 4) stood near the northwest and southeast corners respectively; and two hand mills of the usual kind were on opposite sides of a refuse or storage pit (7*f*). The pit was 1.25 deep, with expanding bottom 1.50 wide, though its mouth measured only 1.10 in diameter.

In Wall 7*a* there were lengthwise and crosswise depressions (Fig. 104) filled with refuse and suggesting the former presence of wooden poles with ties. One lengthwise depression was directly above the stone foundation. Another was .50 above the lower one but .15 inside from the wall front. Both were about .08–.10 wide. Two rounded depressions, .40 apart, extended from the upper lengthwise depression across the breadth of the wall and were about .07 in diameter. Furthermore, a series of vertical holes was noticed, in one case five in a row at distances .25–.35 apart and situated about the center of the wall. The diameters of these holes ranged from .08 to .12. Thus it appeared that the wall was strengthened in every dimension.[1]

[1] Elsewhere in this complex (e.g., in the burial chamber) vertical grooves were noticed in the walls, suggesting the use of poles for strengthening.

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Against the face of Wall 7*a* leaned a series of slabs ranging from small stones to slabs as large as .85×.45×.20 (Fig. 105). A large discarded hand mill (.60×.35×.15) was among them. There is hardly a doubt that these slabs were used to support the overhanging wall. The foundation of Wall 7*a* was about .40 high, and an average of .90 of *kerpich* was preserved. Of Wall 7*b* only an irregular line of foundation stones about .30 high was left; the other walls were relatively well preserved. A large slab at the east end of Wall 7*b* suggests the sill of a doorway connecting Sections 7 and 15. The long Wall 7*d* was not supported by a stone foundation. The average height of the preserved *kerpich* of Wall 7*d* was .65.

Only Wall 15*a* of Section 15 showed traces of *kerpich*. The height of its foundation was .30; of its *kerpich*, .10. Wall 15*b*, .35 high, had apparently consisted entirely of stone. The foundation of Wall 15*c*, .25 high, extends into Section 7 and parallels Wall 7*d* at its southern end. The position of Section 15 suggested that it was an annex of Section 7, repeating the grouping of Sections 9 and 11. It appears that Nos. 15 and 16 were the southernmost rooms of Building B.

FIG. 104.—WALL 7*a*, SHOWING DEPRESSIONS LEFT BY POLES(?)

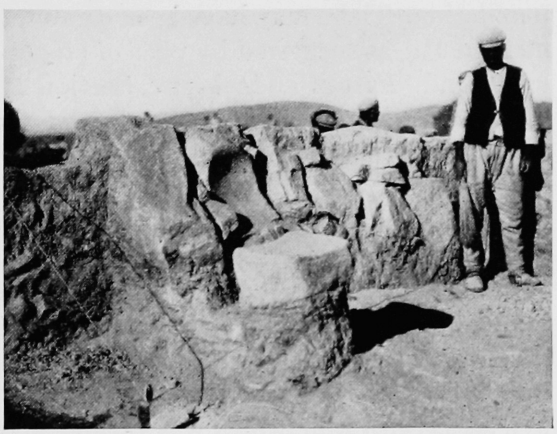

FIG. 105.—HAND MILL AND STONE SLABS LEANING AGAINST WALL 7*a*; FROM THE SOUTHWEST

Sections 16 and 17 bordered Section 18, the southern continuation of Section 2. These rooms, however, were separated from the passage or road by walls, in contrast to Sections 1 and 4. No household utensils were noticed in Sections 16 and 17. In Section 16 there was a pit (16*d*) 1.10 deep, roughly circular. The northeast corner of Section 17 was filled by a large round fireplace (17*c*), plastered as usual. This fireplace consisted of layers of crushed pottery about .25 high. Wall 16*a* continued Wall 7*d*. In Wall 16*c* a stone foundation .30 high supported *kerpich* remains .35 high. No *kerpich* was preserved on Wall 16*b*. The base of its foundation (about .65 high) was .15 above that of Wall 16*c;* its top was only .20 below the mound surface.

Because of the burial chamber and the large Section 7 with some possibly ceremonial objects on an altar(?), we considered the possibility that Building B may have been reserved for cult purposes. If this was true, Buildings A and B may have formed one unit, the northern part with kitchens, storeroom, etc., being used for the matters of daily life.

Building C (Sections 8 and 19) was east of the main passage. Section 18 continued Section 2 to the south. The foundations of its east wall were rather irregularly set, though some large rocks had been used. The foundation of Wall 18*a* extended considerably deeper than the bases of Walls 19*a* and 18*b;* its first *kerpich* courses were flush with their foundations. Little of the *kerpich* was preserved. Though the tops of Level 2 walls appeared at the floor of Level 1 to the east of the passage (Section 18), Section 19 was the only Level 1 inclosure found there.

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Wall 19*b* had a strong foundation .75 high, and the thin *kerpich* layer on its top extended to the very surface of the terrace. The long *kerpich* Wall 2*a*, continuing Wall 19*b* after a short jog, was only .75 high, including a stone foundation averaging .40. Wall 8*a*, abutting Wall 19*b*, was the remainder of a stone foundation. Its end, as well as the eastern section of the room it bordered, had crumbled down the mound slope. Storage or refuse Pits 8*c* and 8*d* were dug into the layer of Level 2 by the occupants of Level 1. During the digging of Pit 8*d* an underlying corner of Section 5 in Level 2 was destroyed (cf. p. 95). The mouth of the tubular Pit 8*d* was almost a perfect circle. Pit 8*c*, less regular, had an expanding bottom 1.60 wide; its top measured 1.35 in diameter. Both pits were, as usual, filled with dark gray refuse. Their tops were flush with the top of the stone foundation of Wall 2*a*.

To the north Section 2 was continued by Section 21, a passage which narrowed to the breadth of a man at the northern end. The western border of this narrow passage was a badly built *kerpich* wall (21*a*) supported by an irregular stone foundation. In places the *kerpich* had entirely disappeared. At the highest point preserved the wall was .90 high, including .45 of foundation. There may have been a gateway leading through both passage walls at the points marked 21*d*, as suggested by piles of stones at these spots; but no definite sill or socket stone was found. Part of an inclosure, Section 25, with *kerpich* Walls 25*a* and 25*b*, lay west of the passage; Wall 25*a* adjoined the passage wall. A tubular refuse pit (26*a*) 1.15 deep was also situated west of the passage.

Like Wall 21*a*, the eastern passage wall (21*b*) was poorly constructed. At the gateway(?) it was interrupted; it may have been continued by Wall 21*c*. The break was caused by a later construction; Wall 24*b* and Pavement 24*a*, apparently Roman, were both directly superimposed on the remains of Period II, about 2,000 years older.

Building D, to the east of Section 21, consisted of Sections 22, 23, and 24. At the eastern plot border the east-west walls of these rooms had crumbled down the slope.

On the northern face of Wall 22*a* irregular patches of plasterlike *kerpich* covered the rather well set *kerpich* wall, which was .50 high above a strong foundation .35 high. The arrangement of some stones in the southwest corner of Section 22 suggests that perhaps there was a small bin at that spot. The double Walls 22*b* and 23*a* had stone foundations with some *kerpich*.

Section 23 had only a small wall section in common with Section 22, and none with any of the other adjoining sections. On the southern part of Wall 23*b* and on Wall 23*a* some *kerpich* was preserved; the rest showed the flat-topped foundations. A short wall section (23*c*) of *kerpich* protruded into the room and, with Wall 23*d*, may have subdivided the room into narrow sections. Wall 23*d* had been partly destroyed by the digging of refuse Pit 23*g*, perhaps of Period VI. On the north side of this pit a Period VI hoard was found which contained a beautifully modeled horse's head from a pottery rhyton, a pottery lamp, beads, bronze dress ornaments, and some coins not yet identified.[1]

This hoard probably belongs to the same period as the very well laid pavement (24*a*) of Section 24 and Wall 24*b* bordering it. The stone foundation of Wall 24*b* rested directly on the supposed border wall (21*c*) of Section 21 (see above). The *kerpich* of Wall 24*b* formed an almost solid mass of light brownish gray color with white limestone particles. The contours of the individual bricks could not be determined.

COMPLEX I, LEVEL 2

The plans (Figs. 94 and 106) show at once that the two Period II settlements which we have found were very similarly laid out. Their orientation was almost identical, and in both cases a road or passage separated the western section of the complex from the eastern. Near the

[1] Period VI will be discussed in *OIP* XX.

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western borders of Plots FF 10 and FF 11 the stratum decreases in thickness. Excavation in Plots DD 10 and EE 10 revealed only a relatively thin refuse layer and some wall fragments of Period II. Below them was Stratum I.

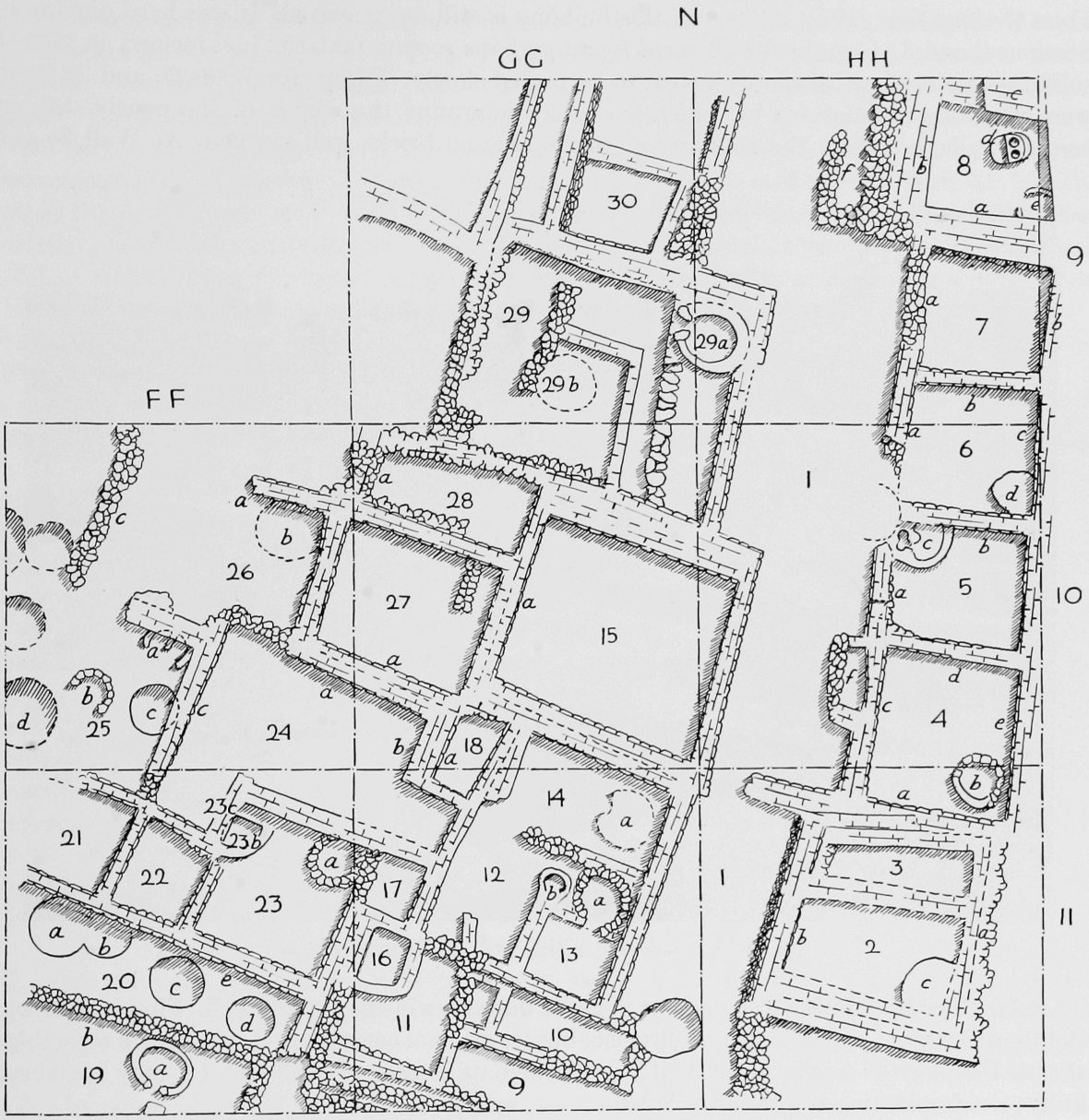

Fig. 106.—Plan of Complex I, Level 2. Scale, 1:200

The situation in Level 2 differed considerably from that encountered in Level 1. Level 2 was rather sterile, and the purpose of the rooms is therefore doubtful. It seems to have been deserted in peace, when the houses became weak; and the population may have moved to another part of the mound. On the other hand there were indications that at some spots the area under consideration may have been occupied continuously, though not as densely, during the period between the Level 1 and Level 2 occupations.

The *kerpich* buildings of Level 2 were in many cases supported by stone foundations; frequently only the foundations were preserved. Sometimes parts of walls seemed to have dis-

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appeared entirely. Here, as in other layers of the mound, the wall stones were certainly re-used by later settlers.

In Level 2 a series of rather uniform inclosures (Sections 2–8) adjoined the passage (Section 1) on the east (Fig. 107); the rest of this building is still unexcavated. It was hard digging in Sections 2 and 3. Crumbled wall *kerpich* and perhaps roofing material had formed an almost solid mass, out of which the walls had to be peeled slowly. Except for Walls 2*a* and 2*b* there were no stone foundations by which we could determine the course of the poorly defined *kerpich* walls, nor were the contours of the individual bricks well marked. At Wall 2*a* the

Fig. 107.—Complex I, Level 2. Sections 2–8 at Left

irregular stone foundation cropped out below a thin layer of the former wall. Fireplace 2*c* was simply a plastered patch, blackened by use; but its original construction apparently resembled that of Fireplace 4*b* (see below). Wall 2*b*, intermediate between Levels 1 and 2, may have been built on a foundation of the lower level.

Section 4 and the inclosures north of it were well defined. There were stone foundations in nearly all walls, and traces of plaster and whitewash were preserved on some (e.g., Walls 4*c*, 5*b*, and 6*b*). The greatest height of the western border walls was 1.45, while the walls extending toward the east decreased in height toward the mound edge. A small annex (4*f*), perhaps a latrine, adjoined Section 4. The circular Fireplace 4*b* had a plastered bottom inclosed by a mixed *kerpich* and stone wall, interrupted at one spot for feeding the fire. About .20 below the level of Fireplace 4*b* there were traces of another fireplace, a small patch of blackened plaster, directly in the center of the room. This hearth may have been discarded after Fireplace 4*b* was built.

In Section 5 we found a fireplace (5*c*) almost identical with those of Section 4, Level 1 (cf.

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Fig. 99), and Section 8, Level 2 (cf. Figs. 109–10). Two slightly oval plastered fireholes were connected with each other; an open plastered patch in front was bordered by a thin *kerpich* wall. In Wall 5*a* there was a rectangular window .60×.45 (Fig. 108). The northwest corner of the room had been destroyed by the digging of a refuse or storage pit during the Level 1 occupation (in Section 8, Level 1; cf. p. 92). The east walls of this room and of Section 6 were continuations of Wall 4*e*. A little below the floor, and flush with the stone foundations of the walls, fragments of a child's skeleton appeared.

In Section 6, as in most Level 2 inclosures, the lack of connection with neighboring rooms was noticed. It is possible that there was a door in the destroyed part of Wall 6*a*, but the other three walls were well preserved and high enough to show traces of openings if they had existed. Wall 6*c*, for instance, was 1.65 high, including .30 of stone foundation. Walls 6*c* and 6*b* had a thick layer of plaster coated with whitewash, and traces of plaster were noticed on Wall 6*a*. Remains of a plastered fireplace (6*d*) in the southeast corner were somewhat above the tops of the neighboring stone foundations.

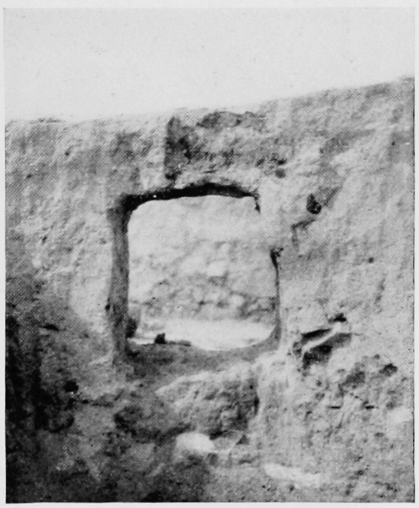

Fig. 108.—Window in Wall 5*a* of Complex I, Level 2

In Section 7 Walls 6*b* and 7*b* each had 1.20 of *kerpich* on stone foundations .35 high. Wall 8*a* had 1.05 of *kerpich* on a .35 stone foundation. Only traces of *kerpich* were found on Wall 7*a* above a stone foundation .40 high. In the center of the north wall of the room (Wall 8*a*) a burned patch indicated the site of a fireplace.

It was extremely difficult to determine the contours of Section 8. It was filled almost entirely with compact *kerpich* suggesting walls. Wall 8*b* was covered with a plaster .04–.06 thick and coated with whitewash. Wall 8*c* apparently was built later, for the whitewash of Wall 8*b* continued beyond the point where Wall 8*c* abutted it. The exact course of Wall 8*c* is still uncertain; it is part of a solid *kerpich* mass. Although the character of the bricks was clear in all walls, the contours were very faint and the joints tight. The stone foundations 8*f* were apparently of an occupation intermediate between Levels 1 and 2, or may even have formed part of the Level 1 settlement.

In Section 8 the best preserved fireplace (8*d*) of the complex was found (Figs. 109–10). It had the characteristic "skull" form encountered only in Stratum II: an inverted hemisphere with two oval openings in the truncated top. The front of the fireplace, where the feeding-hole was situated, was cut off straight. In addition, there were two small circular openings in the northern half—one in the front, the other in the back wall. The fireplace stood on an oval *kerpich* platform plastered in front. At a slightly lower level we uncovered Fireplace 8*e*, of the plain type with plaster and thin *kerpich* walls.

West of Section 1 the situation is complex, and it is hard to read the plan of the structures (Fig. 111). There seem to be parts of several buildings, as indicated by a series of double walls between Sections 14 and 15, 15 and 27, 16 and 23, and 27 and 24. Nearly all the structural remains were badly preserved. For the most part, there were only foundations and traces of former *kerpich* walls, with no indications of doors and windows. Therefore, nothing could be determined about the way the rooms were connected. Most of the foundations were made of irregularly set, rather sharp-edged stones. *Kerpich* dimensions could be determined only in Section 15.

One large inclosure was divided into Sections 12, 13, and 14. Here two almost adjoining fire-

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places and several grinding-stones were uncovered. Fireplace 13*a* was circular, plastered as usual, and inclosed by a thin stone wall .30 high; it opened toward Section 13. Fireplace 13*b* was heart-shaped and plastered; its wall was made of *kerpich* burned brown-red. A paved patch (14*a*) was probably another fireplace, though no traces of a wall were noticed.

A burial was uncovered in the small Section 18. It is problematical whether the chamber had been built for the purpose or whether it had been used secondarily as a burial place.

Section 15, a building by itself, was inclosed by well built plastered and whitewashed *kerpich* walls (.30 high) supported by stone foundations. Though there were no traces of doors or windows, the *kerpich* was indistinct in some spots, and lateral openings may have existed.

Section 20 appeared to be a vacant place between buildings represented by Section 19 on one side and Sections 21–25 on the other. Here again, a certain similarity in general plan of

FIG. 109.—FIREPLACE 8*d* IN LEVEL 2 OF COMPLEX I

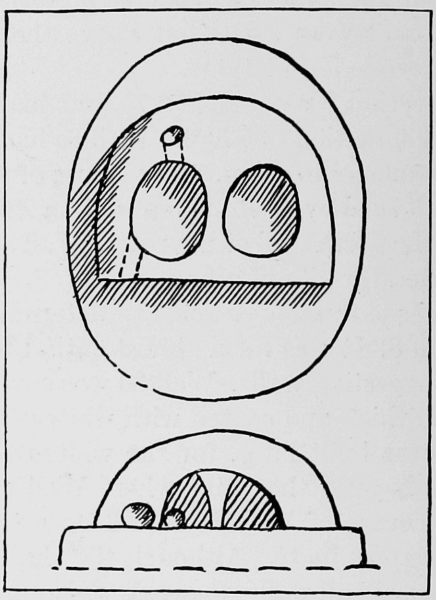

FIG. 110.—DRAWING OF FIREPLACE 8*d*. SCALE, 1:25

Levels 1 and 2 was noticed (cf. Section 12, pp. 89 f.). On Wall 20*e* there were some traces of *kerpich*, but only the irregular foundation stones of Wall 19*b* were preserved. There were four refuse pits in Section 20. One of them (20*a*) had been dug from Level 1. Pits 20*b*, 20*c*, and 20*d* had slightly expanding bottoms; their depths were 1.30, 1.50, and 1.30 respectively.

In Section 19 there was a well built circular fireplace (19*a*) inclosed by a thin *kerpich* wall with some stones. The plastered bottom was concave and blackened by use; two stones flanked the feeding-hole. A rectangular stone .25 high and artificially smoothed in parts was situated opposite the opening, but it may have fallen there from some unexcavated wall. A small cooking-pot stood near the fireplace, and a second one leaned against Wall 19*b*.

Sections 22, 23, and 24 were divisions of a large inclosure. They were adjoined on the west by Sections 21 and 25, of which the western borders had been destroyed. A stone-lined storage or refuse pit .70 deep (23*a*) occupied the northeast corner of Section 23; Fireplace 23*b* was situated in the northwest corner. The bottom of this fireplace was plastered, and its front was bordered by a thin *kerpich* wall .20 high. A series of fire-reddened bricks extended below Wall 23*c*.

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The irregular outline of Section 24 suggests that there was once a continuation of Wall 23*c*. Only Walls 24*a* and 24*b* were well built. The stone foundations and *kerpich* walls had straight fronts. Plaster and whitewash were preserved on Wall 24*a*. The low *kerpich* layer of Wall 24*c* also showed traces of plaster and whitewash. Fragments of a plastered patch indicated the site of a fireplace about flush with the top of the foundation of Wall 24*a*.

Sections 25 and 21 were the westernmost of the complex. There was a circular fireplace (25*a*) paved and bordered by a *kerpich* wall. The two halves of the hearth were separated by a central wall about .30 high. Pit 25*b*, perhaps for storing grain, was lined with stones at its

FIG. 111.—GENERAL VIEW OF COMPLEX I, LEVEL 2, FROM THE EAST. SECTION 29 IN THE CENTER, MOUND A IN THE BACKGROUND

upper edge only, as the modern villagers line their grain pits. It was about .50 deep. Pits 25*c* and 25*d* were .80 and 1.30 deep respectively.

Section 27 was intermediate between Levels 1 and 2. Its walls had apparently been leveled off during the later Period II occupation; their tops showed faintly at the floor of Section 6 of Level 1 (cf. p. 88). Its walls were well built and had rather high, regular stone foundations. In addition to the actual level difference of the foundations of Walls 27*a* and 24*a*, the colors of the two walls indicated that they were not contemporaneous.

Wall 26*a* was part of a room of the same intermediate level. A few traces of *kerpich* were preserved on its foundation, whereas of Wall 26*c* of the same occupation only the foundation remained. Pit 26*b* at the base of Wall 26*a* was 1.50 deep.

Section 28, on the other hand, belonged to Level 2 except for the remains of a foundation on top of Wall 28*a*. No *kerpich* was found on the irregular foundation walls of this section.

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In Sections 29 and 30 there were traces of a sublevel below Level 2. The situation will not be clear until the excavation has been carried downward. Fireplace 29*a* is intermediate between Levels 1 and 2, whereas the other fireplace (29*b*) belongs to Level 2.

SUMMARY OF COMPLEX I

The structures of the uppermost Period II level of Complex I are not very well preserved, owing in part to their position near the surface. Probably they were exposed for a long time to wind and weather before they were protected by the mound crust forming on top. On the other hand, the latest buildings were not particularly well constructed, and many walls were rather weak. They were built of *kerpich* bricks with or without stone foundations. Some walls of the upper level of Complex I were strengthened by woodwork, as best illustrated by Wall 7*a* (cf. p. 90 and Fig. 104). Patches of plaster were noticed. "End stones" of large size were apparently used to strengthen exposed ends of walls (cf. Wall 3*a*, p. 86).

In Level 2 there were some inclosures which were considerably better built and stronger than the walls above. Good whitewash was more frequent than in the upper level. In all other respects the construction of the two levels of Complex I was alike.

The *kerpich* is usually light gray-brown; but gray and brown shades occur, and sometimes white limestone particles are present. The bricks are irregularly staggered as a rule, the width of the joints ranging from .005 to .03. The dimensions vary considerably. Some of the bricks are square or almost square.

The floors are hard-tramped soil. Slab pavements are rare, and no room was found in which the slabs extended across the entire floor. As to the roofs, we have some clues from lumps of *kerpich*-like dirt with impressions of slender branches. We may assume that layers of these materials rested on top of wooden beams and thicker branches. Some doorways were easily determined by the presence of definite stone sills and socket stones (cf. Fig. 98), while others were only suggested by gaps in the wall remains. One rectangular window was found in Wall 5*a* of Level 2 (cf. p. 95 and Fig. 108).

There are two elaborate types of fireplaces not found in any other stratum of the mound. One is the fireplace with two cooking-holes and a plastered area in front (cf. Figs. 99, 109, and 110). The second type is represented by the basket-shaped fireplace in Section 9 of Level 1 (Figs. 101–2). Other fireplaces are plastered patches of circular or oval form, with or without elevated rims (cf. Fig. 100). These occur also, though far less frequently, in other strata of the mound.

Everywhere in Stratum II there are great numbers of storage pits which may have been used secondarily to hold refuse. They are usually tubular or somewhat bottle-shaped with expanding bottom. Even today such pits (called *kuyu*) are used by the Turkish villagers for storing grain. The bottom and sides are covered with straw, the grain is deposited in the middle and covered with straw, and earth is used to fill up the pit. A stone lining protects the upper part of the wall. After such a pit is no longer useful, it serves as a dump.[1]

In the lower level, storage pits were more frequent than above; but fewer articles of domestic furniture occurred. We have not yet uncovered a burial chamber corresponding to that of the upper level. In no other stratum of the mound were such great numbers of storage vessels found. Most of them were stationary and set into the floor.

COMPLEX II, LEVEL 1

The arrangement of the Period II settlement in Complex II (Fig. 112) resembles closely the situation in Complex I. Here again a passage (Section 18) leads from the northeast toward the

[1] Turkish structures such as this will be discussed more fully in *OIP* XX.

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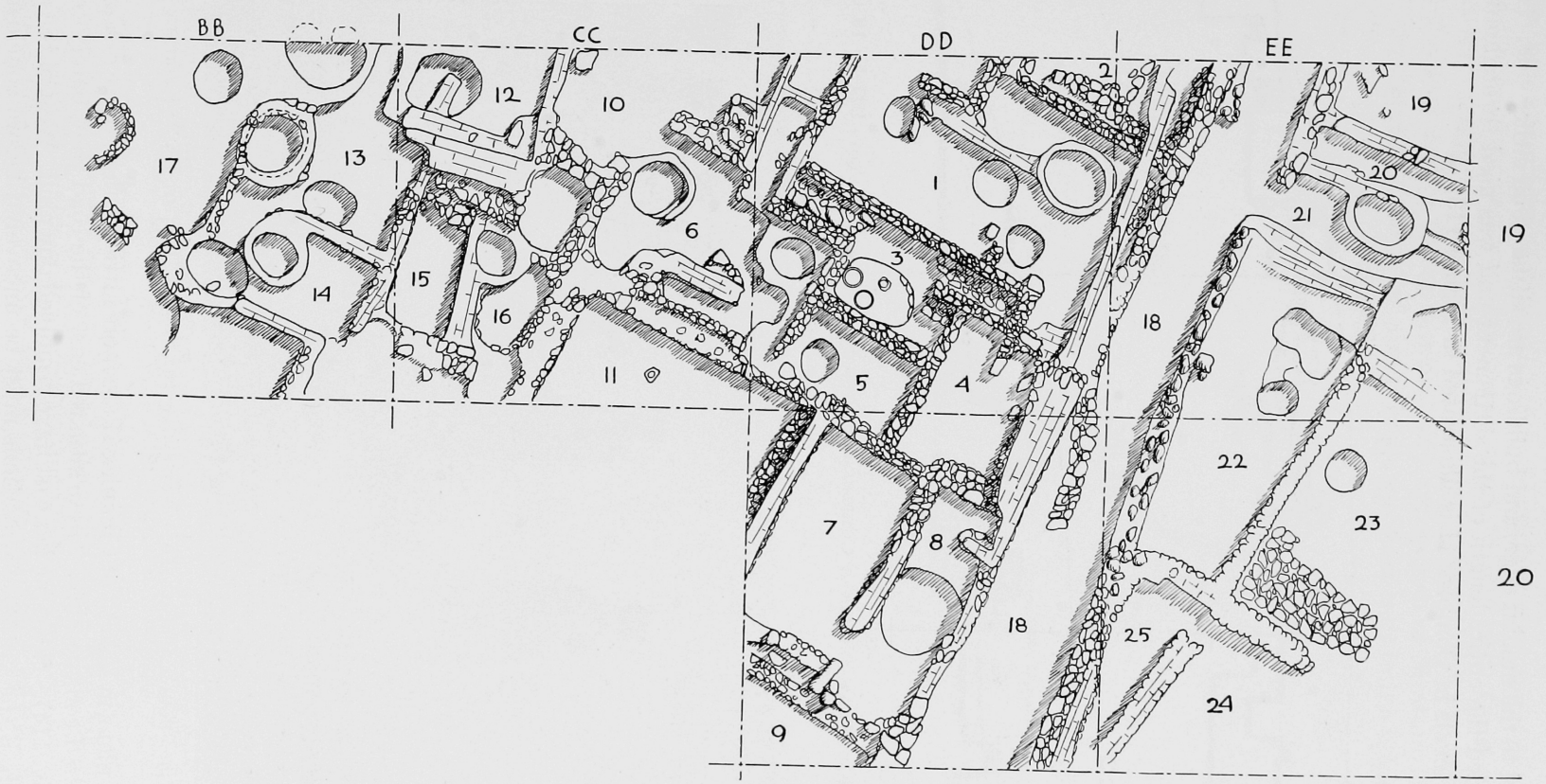

Fig. 112.—Plan of Complex II, Level 1. Scale, 1:200

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southwest, parallel to the mound edge, and buildings are situated on either side. This passage apparently extended the entire length of the settlement and was used throughout Period II. The difference of levels in Complex II is illustrated in Figure 113.

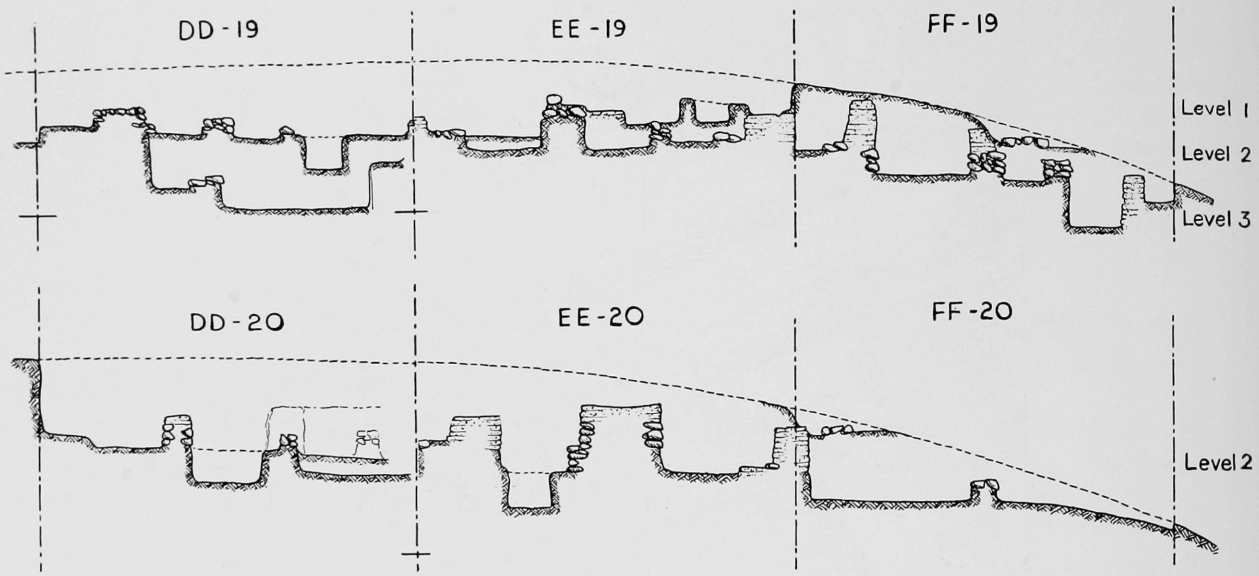

Fig. 113.—West-East Cross-Section of Complex II on the Middle Lines of Plots DD–FF 19 and DD–FF 20. Scale, 1:200

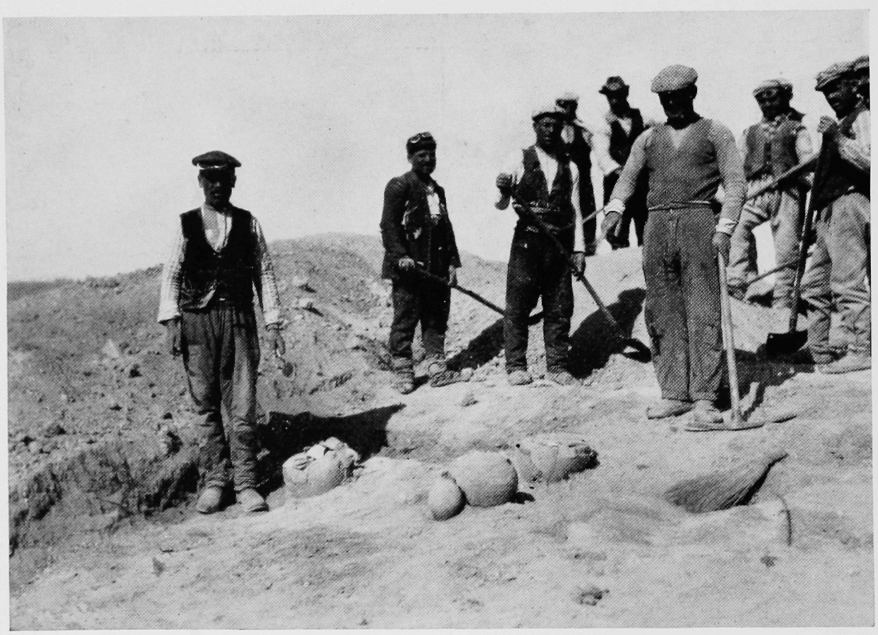

Fig. 114.—Pots and Wall Tops Just below the Surface in Plot EE 20 (Complex II)

The building plans in Level 1 of Complex II are more intricate than those of Complex I. The walls have suffered considerably. Those situated east of the road were barely covered by the mound shell (Fig. 114). Those farther east have crumbled downhill. West of the road the areas north and south of the present excavations must be uncovered before conclusions as to the extent of individual buildings can be made. The original plan of these buildings may have

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been regular, but alterations and rebuilding have made the relations of the walls obscure. Traces of fireplaces of the common type were noticed (cf. Fig. 100). Great numbers of storage pits are scattered about; that in Section 23 is typical (Fig. 115). These pits are particularly frequent at the west end of the settlement. The upper level of Stratum II seems to end in Plot BB 19. Its breadth at this point approximately corresponds to the breadth of Complex I.

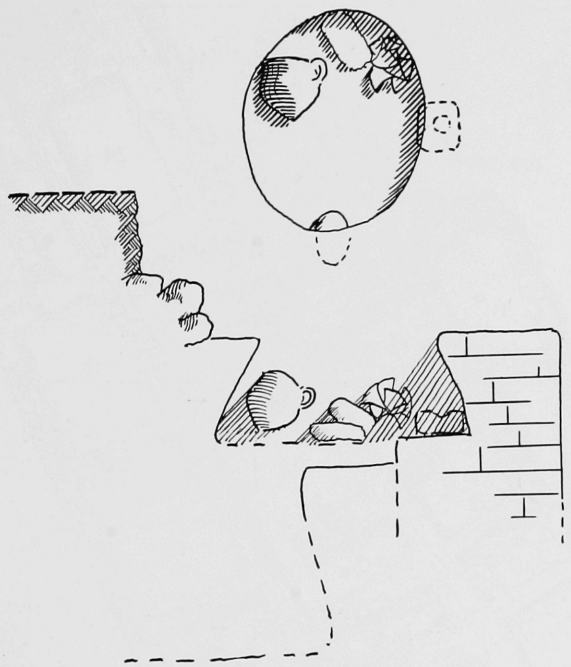

FIG. 115.—A STORAGE PIT AND ITS CONTENTS IN SECTION 23 OF LEVEL 1 OF COMPLEX II. SCALE, 3:100

COMPLEX II, LEVEL 2

In Complex II there was apparently only a thin refuse layer of Level 2 of Stratum II west of the passage. In Plot CC 19 we found Period I pots immediately below this thin layer.

The most important building so far uncovered in Stratum II may have been a community storehouse (Figs. 116–17). Its unusually strong walls first attracted our attention. Then we noticed an almost complete lack of domestic articles, a complete lack of fireplaces, a scarcity of pots, and an unusually small number of potsherds. These criteria, contrasting with our observations in the other buildings, convinced us that this building could not have been used for living purposes. We discarded also the idea that it could have been a cult building. All this gave color to the suggestion that it was a community storehouse.

A layer of sterile white and yellowish lime and gravel, like that noticed elsewhere along the mound edge, covered the building (cf. pp. 81 f.). Sections 1 and 2, somewhat below the edge, were completely filled with this material, indicating that they were entirely exposed when it was deposited. This sterile dirt may have been used to level the surface. Sections 3 and 4, situated higher on the mound, had only a surface layer of this material.

The storehouse consists of three principal rows of rooms inclosed by massive walls (Fig. 118). The stone foundations are unusually heavy. On the average, larger stones were used here than for the foundation of the later Period V fortification.[1] The stones are rather sharp-edged, as in the structures of Stratum I (cf. p. 18). The *kerpich* is uniform in color and has

[1] Stratum V will be described in *OIP* XX.

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the same dull light yellowish brown shade as the average walls in the other Period II buildings. The individual *kerpich* bricks are extremely large (Fig. 119) as compared with other bricks of this or other periods. The joints are normally tight and staggered; as a rule the vertical joints are looser than the horizontal. We found a few sections of fired brick wall, but

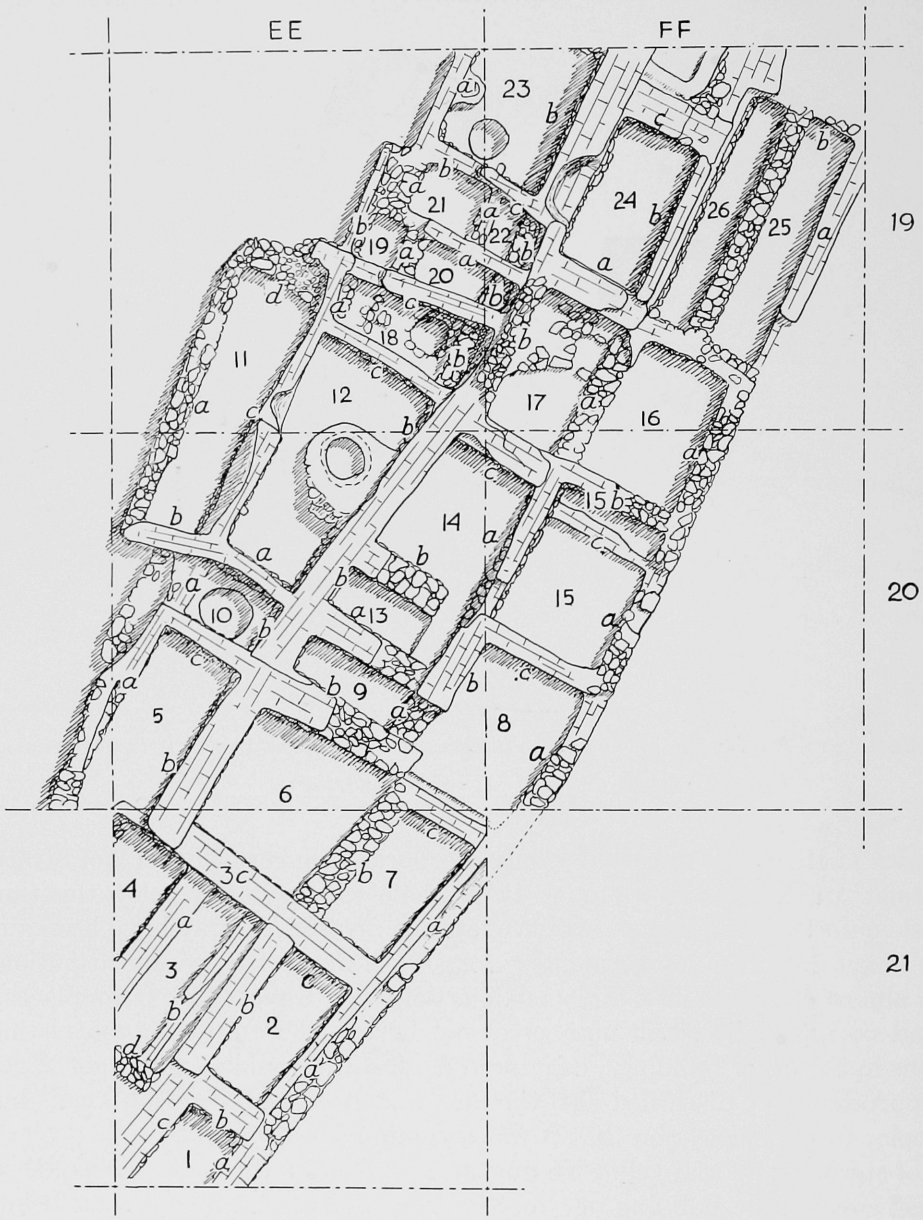

Fig. 116.—Plan of Complex II, Level 2. Scale, 1:200

the firing was probably accidental. Neither windows nor doors were noticed, and entrance must have been by means of hatchways and ladders.

It is probable that the structure was in use throughout the two definite building phases which have been recognized in Level 2. Even during the occupation of the lower sublevel some walls were altered. Wall 7*b* was moved out of line and to the east. When it was rebuilt, its stone foundation was carried higher than before. The plan shows clearly that Wall 7*b* is

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the only break in the long straight wall separating the eastern from the central rooms. Walls 9*b*, 13*a*, and 14*b* were added during the second building phase; Walls 13*a* and 14*b* seem to have subdivided an originally larger inclosure comprising the later Sections 9, 13, and 14. Walls 10*b*

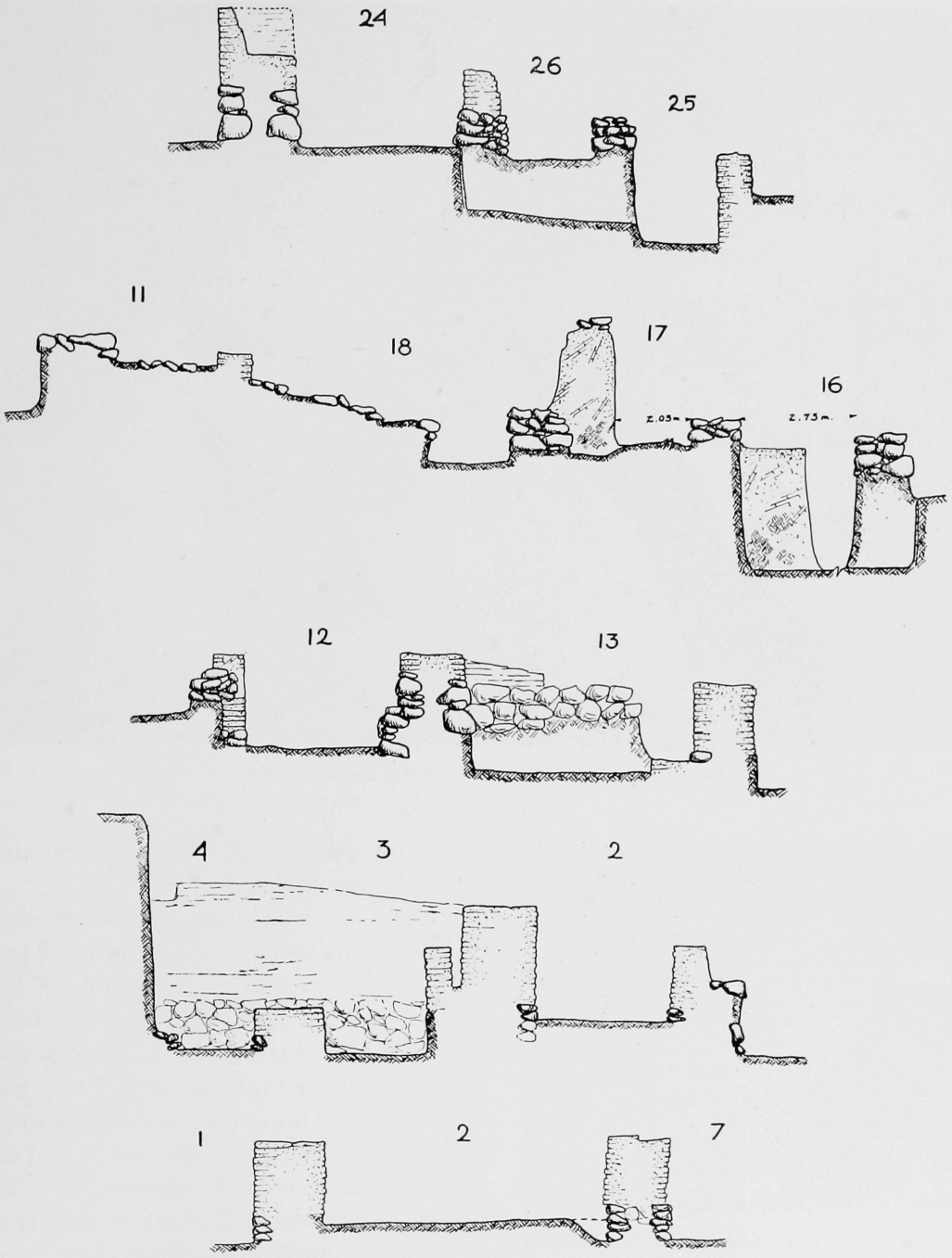

Fig. 117.—Cross-Sections of Various Rooms in the Community Storehouse, Level 2 of Complex II. Scale, 1:100

and 13*b* were rebuilt. Section 11 and some adjoining wall fragments were added perhaps even as late as the Level 1 occupation. This inclosure projects into the road, which certainly existed during the Level 2 occupation as well as during that of Level 1.

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Some wall fragments of Level 1 rested on the tops of Level 2 walls. In addition there were wall sections belonging to a level underlying Level 2. Further excavations will show whether important remains of Period II are situated below the storehouse.

FIG. 118.—THE COMMUNITY STOREHOUSE, FROM THE SOUTH

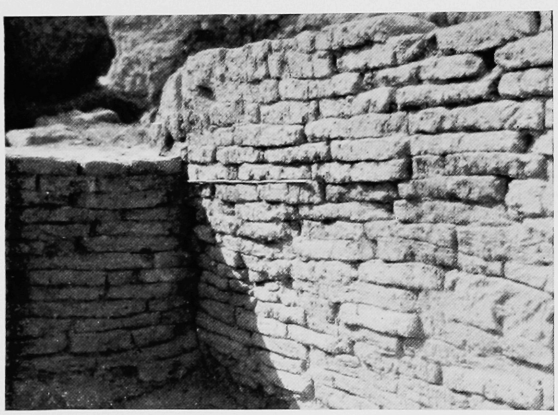

FIG. 119.—WALLS IN THE COMMUNITY STOREHOUSE READY FOR RECORDING

Most of the rooms were of average size, but there were clusters of small inclosures, particularly Sections 18–22. In Section 18 crudely paved steps led down from the west toward a stone-lined pit at the east end. Section 23 is the only room in the building which has a well defined plaster. This coating is .02 thick in places; on the east wall it is pinkish. We found a number of typical Period II objects in Section 23, and there is evidence that it was used throughout the occupation of Level 2 of Stratum II. Nearly all the other rooms were sterile as to domestic objects; only a few anthropomorphic figurines (Nos. b 2055–58, pp. 128–30) were of interest.

We must assume that the storehouse of Level 2 was systematically cleaned out when it was deserted. Comparing this with the conditions in the lower level of Complex I, we come to the

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conclusion that the earlier phase of Period II ended peacefully. The successive building stages intermediate between the original structures and the last settlement (Level 1) indicate that no definite break took place.

PLOT J 33

In view of the importance of this plot as the find-area of the second cuneiform tablet (b 2700), a detailed description of the architectural remains is given. A thin layer of Roman refuse was encountered after the ground was broken, and at a depth of .40 a fine Period IV jar was uncovered (cf. p. 244). At 1 meter we struck the top of Stratum II, which the reliable surface sherds had led us to expect in this plot. At 1.20 the wall tops of the Period II upper level appeared, which, however, was indicated only by wall fragments (1*a* and 1*b*, Fig. 120). There were some remains of light brown, white-speckled *kerpich* on Wall 1*b*. The wall tops of Level 2 (2*a*, 2*b*, 2*c*, and 2*d*) appeared at a depth of 2.20, flush with the bottom of Level 1. Wall 2*a* was under Wall 1*b*. Most of these walls are only partly visible at the plot wall. Only stone foundations remained of Walls 2*a* and 2*b*, but on Wall 2*d* there was a little badly defined light gray *kerpich*. The foundation stones of Wall 2*c* were of considerable size (.75×.25). On these rested the Level 2 wall: one course of small stones supporting a wall of *kerpich* (here light gray) one row thick and two courses high. This left an unoccupied ledge on top of the foundation. Perhaps the foundation was built for an earlier and stronger wall. This was the only wall in Plot J 33 where the *kerpich* could be measured, and even here the measurements were not satisfactory.

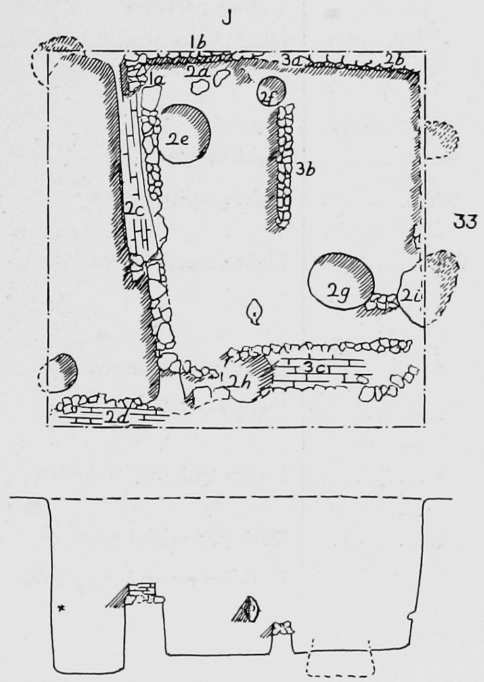

FIG. 120.—PLAN AND CROSS-SECTION OF STRATUM II STRUCTURES IN PLOT J 33. SCALE, 1:200

A number of storage or refuse pits (2*e*, 2*f*, 2*g*, 2*h*, and 2*i*) may be attributed to the Level 2 occupation, though one or another may have been dug by the latest Period II settlers. The pits in the northwest and southwest corners of the plot were of uncertain dimensions and origin, though they doubtless belonged to Period II. Most of these pits expanded toward the bottom.

PIT MEASUREMENTS

Pit	Depth	Diameter of Top	Diameter of Bottom
2*e*	.90	1.40	1.50
2*f*	.50	.85	.85
2*g*	1.00	1.50	1.65
2*h*	1.00	.....	.....
2*i*	2.00	1.30	1.60

The second cuneiform tablet (b 2700) found at Alişar was discovered at a depth of 3 meters in the refuse layer intermediate between Levels 2 and 3 (Fig. 121). Lying near by, but slightly lower, were a large jug (b 2738; cf. p. 114) with typical Period II bill-spout and a typical pitcher (b 2703; cf. p. 112) of the same period.

Wall 3*a*, simply a two-course foundation, marked the lowest of the three levels visible on

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KERPICH MEASUREMENTS

Complex I

These are measurements of individual bricks, not necessarily of the largest, the smallest, or the average.

LEVEL 1

Wall	Color	Length	Width	Height	Remarks
2*a*	Light grayish brown	.33 .35 .35	.33 .325 .34	.08 .09 .08	Joints tight, about .005
4*a*	Light grayish brown with white stone particles	.43	.40	.08 .075	Joints staggered, .005–.01
5*b*	Brown and light grayish brown with white particles	.44 .45 .445 .44	.35 .32 .32 .35	.08	One layer only
9*c*	Light brown	.41	.35	.095	Joints staggered, .01–.03
9*d*	Light grayish brown		.35 .35	.085 .10	Staggered joints, .01
10*e*	Light grayish brown	.38 .30	.38 .37 .375 .38	.09 .09 .085 .095	
16*c*	Light grayish brown	.48	.40		Badly weathered. Joints average .01
17*a*	Light grayish brown	.41 .40	.27 .31		Two bricks broad; joints tight, baked together
21*a*	Brown and grayish brown	.43	.38	.09 .065	Joints staggered, tight, about .005
22*a*	Dark yellowish brown	.....	.....	.....	Cracked
25*b*	Dark brown and gray-brown	.36 .37	.36 .36	.08 .10	Joints tight, about .005

LEVEL 2

Wall	Color	Length	Width	Height	Remarks
4*c*	Light gray	.39 .39	.33 .33 .34 .34	.08 .07 .075	Plaster .01–.015; whitewash .003; joints irregular, staggered
5*b*	Light gray	.36 .38	.33 .34	.08 .085	Plastered, whitewashed
6*a*	Light gray	.37 .40 .37	.33 .34 .33 .325 .325	.08 .07 .07 .09 .08	Joints rather regular, largely staggered, loose (.01–.03), filled with yellowish brown dirt
6*b*	Light gray	.45 .40 .46	.32 .32 .33 .36 .33 .33	.085 .08 .07	Joints irregular, staggered, loose, .01–.025
7*b*	Light gray		.35 .36 .35	.09 .08 .09	Joints staggered, .01–.02
8*c*	Light grayish brown	.40	.39	.08	Joints staggered?
15*a*	Yellowish brown	.38	.36	.085	Joints staggered; vertical tight, horizontal .02

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LEVEL 2—*Continued*

Wall	Color	Length	Width	Height	Remarks
15*b*	Light gray and yellowish brown		.35 .38	.07 .075 .09	Joints staggered, average .01
18*a*	Light gray	.40 .41	.335 .33	.07 .07	Joints staggered, rather regular, average .01
24*a*	Light grayish brown	.35 .32	.375 .33	.07 .07 .05 .09	Joints staggered, .01–.02
24*b*	Light grayish brown	.34 .34 .355	.27 .29	.08 .08 .09	Joints staggered, average .01
27*a*	Yellowish brown	.40 .40	.35 .33	.095 .10	Joints staggered, average .01

PLOT J 33

Wall	Color	Length	Breadth	Height	
1*b*	Light brown, white-specked				
2*c*	Light gray	.28 .29 .38 .40	.30 .17 .29 .26	.095 .06 .09	
2*d*	Light gray				
3*c*	Light gray-brown and dull yellowish brown				

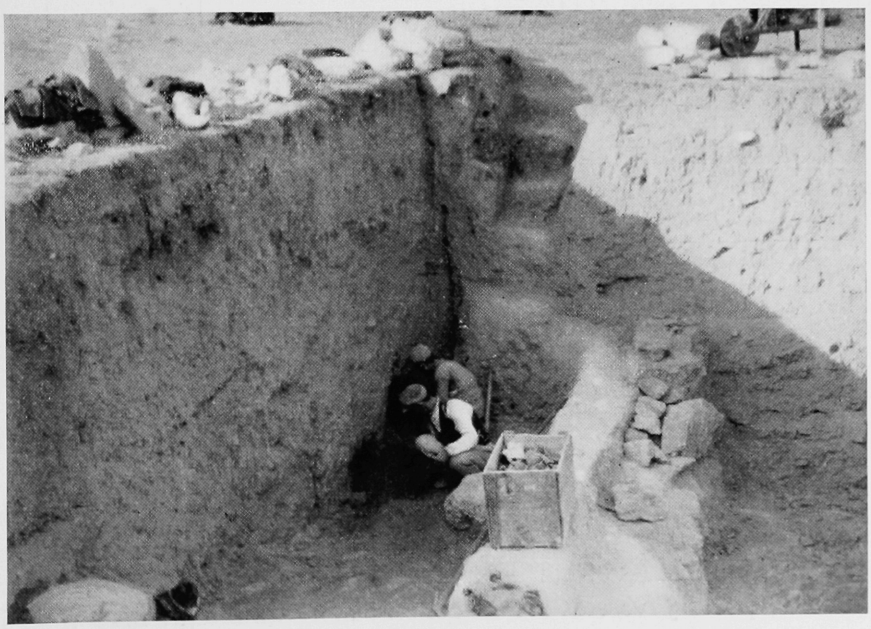

FIG. 121.—FIND-SPOT OF CUNEIFORM TABLET b 2700 IN PLOT J 33

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the plot wall. Of Wall 3*b* only the stone foundation was preserved, averaging .25 in height. A light gray-brown *kerpich* layer with some dull yellowish brown bricks was found on the stone foundation of Wall 3*c*, but no measurements could be obtained. The architectural remains of all levels of Stratum II in this plot were weak and badly constructed, in contrast to the storehouse in Complex II of the same stratum. At Level 3, 4.50 deep at the lowest point, Stratum II was not yet exhausted.

WALL MEASUREMENTS

Complex II, Level 2

These measurements are averages, unless otherwise stated.

Wall	Thickness of Wall	Dimensions of *Kerpich*	Joints		Dimensions of Stones
			Vertical	Horizontal	
1*a*	.....	.45×.40×.075	.01–.04	.....	.45×.30×.20 .50×.35×.20 .50×.25
1*b*	About .95	.50×.40×.07	.005–.03	.005–.01	.44×.25
1*c*	.....	.50×.40×.065	.01–.03	.005–.01	.40×.35
2*a*	About .85	.50×.38×.065	.....	.....	.50×.30×.30
2*b*	About 1.00	.51×.50×.065	.005–.04	.01–.02	.....
2*c*	.95	.50×.39×.065	.005–.01	.01	.40×.20
3*c*	.95	.51×.41×.065	.01	.005–.01	.50×.20 (max.)
5*b*	.....	.495×.38×.065	.....	.....	.65×.30 (max.)
5*c*	.....	.44×.38×.065	.005	.005	.....
7*a*	.80?*	.50×.39×.065	.01–.06	.005–.015	.....
7*b*	.....	.....	.....	.....	.50×.35×.20
7*c*	About .50	.50×.43×.085	.005	.005	.....
8*b*	1.00†	.45×.33×.065	.01	.01	.....
8*c*	About .48	.48×.41×.065	.01–.02	.005–.015	.....
9*b*	.....	.....	.....	.....	.60×.40×.25
10*a*	.....	?×.32×.075	.01	.01	.....
10*b*	.90	.51×.405×.065	.01–.015	.01–.015	.65×.40×.35
11*c*	.32	.38×.32×.065	.005–.015	.005 and less	.....
12*a*	.37	.40×.37×.06	.01–.02	.005–.01	.....
12*b*	About .92	.50×.39×.065	.005–.02	.005–.01	.40×.30
12*c*	.35	.41×.35×.075	‡	.....	.....
13*a*	.....	.....	.....	.....	.50×.25
13*b*	.90	.40×.40×.065	.005–.015	.005–.015	.65×.40
14*a*	.50	.50×.40×.065	.005–.035	.005–.015	.....
14*b*	.95	.50×.42×.065	.....	.....	.40×.40×.30
14*c*	About .94	.52×.39×.065	.005–.035	.005–.015	.....
15*b*	Disintegrated *kerpich*				
23*b*	About .90	.50×.40×.065	.01–.025	.005–.01	.85×.50
24*a*	.90	.51×.41×.065	.....	.....	.....

* The outside face of Wall 7*a* is badly disintegrated, and it is not possible to be certain of this measurement.

† The eastern facing of Wall 8*b* is about .40 thick; that on the west side, about .45. The core, .15 thick, is composed of small pieces of *kerpich* and quantities of the mud mortar used in the joints. Some headers extend across this core.

‡ Wall 12*c* is in very poor condition.

POTTERY

VESSELS

The people of Period II produced the most striking pottery forms found at Alişar. Though beautifully decorated vessels occur in Stratum III, Stratum IV, and Stratum V, and Roman vessels exhibit superior technique, hardly any of them can compare in form with those of Alişar II. Moreover, pottery vessels are in general more abundant here than in any other stratum of the mound.

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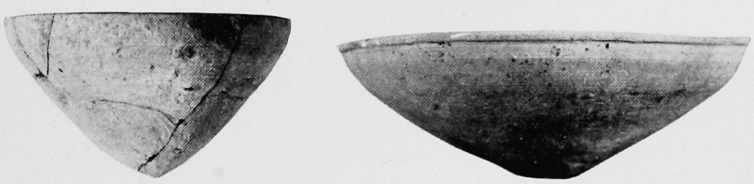
The pots of this period are the first at Alişar to show wheel technique.[1] Another distinctive feature is their almost total lack of painted decoration. The wheelmade and undecorated pottery of Period II contrasts strikingly with the handmade and painted vessels of Periods I and III.

There are, however, a few specimens of painted decoration in Stratum II, among them large jars with crude zigzag patterns (cf. Fig. 140), sherds of bowls decorated with simple curved lines, and animal heads painted with simple dashes. On some vessels a few incised grooves give an ornamental effect (cf. Fig. 129). Many vessels have elaborately modeled handles and spouts. Others bear relief ornamentation (cf. pp. 132–40).

Most of the Alişar II ware is light yellowish brown, light brown, or light gray-brown. Usually no surface wash was applied, or, if it was used, it had approximately the color of the paste. An exceedingly pleasing effect was obtained on some vessels by mixing powdered mica with the wash, giving the surface a somewhat golden or silvery luster. In some cases a brown-red wash covers parts of the visible surfaces. The brownish ware has in general a granular surface, owing apparently to grit tempering. The finishing-tool, where it was employed at all, seems to have been a wooden paddle or similar instrument.



b 826 b 1430

FIG. 122.—TYPICAL BOWL b 826 AND BOWL b 1430. SCALE, 1:3

Red ware is less frequent. There are vessels with a rather thick red-brown slip, sometimes with buff shades; others have a thin red-brown wash. Both highly polished and dull specimens occur. The luster was produced by a polishing-stone, not by the wooden paddle(?) used on the common ware. This is the only definite type of advanced red ware in any Alişar stratum prior to the Roman or perhaps Hellenistic period, though individual sherds of good red ware occur in Stratum III and all the later strata.

There is also one specimen of glazed ware (cf. Color Plate III), probably the oldest so far found *in situ* in Anatolia.

In addition to form and surface treatment, the paste of the Period II vessels is characteristic. The fractures usually show light brown layers, sometimes very thin, near the surfaces, whereas the color inside ranges often from light gray to dark gray. The variations in color are due to the firing, a process about which we have no information.

The following vessel forms occur in Stratum II: bowl, zoömorphic bowl, cup, chalice, pitcher, jug, jar, cooking-pot, storage jar, and ore ladle. With them we group in our description two objects of uncertain use (cf. Fig. 145). The common household vessels, particularly bowls and pitchers, are extremely uniform, with only slight variations. Vessels with pointed bottoms apparently rested on stands of perishable material. Larger vessels of that type were imbedded in the floor.

Three distinct bowl forms were noticed. The type represented by Bowl b 826 (Fig. 122; cf. Plate X) is the most common. Its form is an inverted convex cone, tapering at the top to a rounded lip. The paste shows in cross-section a light gray center with light brown surfaces. Both exterior and upper interior are light grayish brown and granular. The wheel marks are

[1] Unless otherwise stated, all the Period II vessels to be described are wheelmade.

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distinct on the interior and on the upper exterior. On the lower exterior they are obliterated by flattened areas and striations produced by a wooden paddle(?).

Bowl b 1430 (Fig. 122; cf. Plate X) has a small flat bottom, and the lip is squared off and projects slightly. The surfaces show much powdered mica. Bowl b 2737 (Fig. 123; cf. Plate X) is a modification of the typical form (b 826). The lip is more rounded and the body more convex. Bowl b 2531 (Fig. 123; cf. Plate X) has a somewhat contracted upper body, coated with a red-brown wash. An unusual specimen, No. b 2532 (cf. Plate X), was found in Plot HH 9 in the refuse between Levels 1 and 2 (cf. Fig. 95). Its form is identical with that of Bowl b 826 (see above). If this vessel was wheelmade, the wheel marks were obliterated by the polishing-stone, the use of which in Period II is unusual. The dark brown-red surface color is that usual in Periods I and II. The vessel appears to be an imitation of the Period II bowls under consideration.

Bowls like No. b 1682 (cf. Plate X) are of a different type. There is a ring bottom instead of the pointed or somewhat flattened bottom of the first type. Two triangular handles, acute or slightly rounded, are attached to opposite sides of the always contracted upper body. In many cases a brown-red wash covers the upper body and sometimes the handles.

b 2737 b 2531

FIG. 123.—VARIATIONS OF TYPICAL BOWL FORM. SCALE, 1:3

So far, only one beautiful bowl, No. b 2806 (Color Plate II; cf. Plate X), represents the third type. Though its form is unusual, the find-spot and paste place this vessel undoubtedly with Period II. The small ring bottom is slightly concave below and almost solid. There is no doubt that the vessel is wheelmade, though the wheel marks were obliterated by the polishing-stone, which left faint vertical striations on the exterior and horizontal polishing-marks on the interior. The exterior is brown-red and highly polished, while the interior is light brown and smooth.

The purpose of many duck or goose head fragments found in Stratum II was explained by zoömorphic bowl No. b 1673 (Color Plate III; cf. Plate X). It was uncovered in the burial chamber of Complex I (cf. pp. 88 f.) and lay with Pitcher b 1674 (cf. Fig. 129) near Skeleton b X34. The vessel rests on a small ring bottom. The conventionalized head and neck of the duck or goose may have served as a handle. Its wings and tail are shown as tongue-shaped protuberances on the rim. There is some powdered mica both on the interior, which is light brown and granular, and on the exterior, which is coated with a red-brown slip. Two ornamental grooves encircle the exterior.

Zoömorphic Bowl b 1466 (Fig. 124; cf. Plate X) shows the front of an ox. The head is hollow, and the mouth is used as a spout. Though it is rather naturalistic, this head is not as well modeled as No. b 1437 (in frontispiece). The legs, represented in miniature, serve to stabilize the bowl, which has a slightly convex bottom. The flat top shows several perforations in addition to a larger hole in the center. There were two loop handles, but one has disappeared. The surface is light gray-brown and smooth. The character of this vessel, in addi-

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tion to the circumstances of the find (cf. p. 90), suggests that it was not used for a utilitarian purpose. Perhaps it was a libation vessel. It was found close to the "Cappadocian symbol" disk (b 1529) and a bird fragment (b 1528). Other animal forms used as handles and spouts are described on pages 136–40.

b 1466

FIG. 124.—ZOÖMORPHIC BOWL. ACTUAL SIZE

The cups of Period II, like many other household vessels of the period, have pointed bottoms. Two are illustrated in Figure 125. Cup b 1303 (cf. Plate X) is coated on both surfaces with a grayish white slip and was certainly made on the wheel. Cup b 2472 (cf. Plate X) has a brown exterior; it is doubtful whether the vessel was wheelmade.

A glazed cup, No. b 1868 (Color Plate III; cf. Plate X), was found in the refuse layer between the floors of Levels 1 and 2 of Complex I; it was separated from more recent layers by

b 1303 b 2472

FIG. 125.—CUPS. SCALE, ABOUT 3:5

the floor of a storeroom (Section 1). The bottom is flat, and the almost hemispherical body is contracted below the rim. The paste is grayish white porous frit(?). The interior is covered with an iridescent dark brown glaze with some light blue spots. The exterior, coated with a light blue glaze, is decorated by a simple pattern of dark brown, almost black, bands. The cup may have been imported. If the Alişar II people had made glazed pottery, we should probably have found great numbers of fragments; but so far this specimen is unique in Stratum II.

Chalice b 1670 (Fig. 126 and Color Plate II; cf. Plate XI) is a masterpiece of Period II pottery. It is significant that it also is a mortuary vessel (found with Skeleton b X31) from the burial chamber of Complex I (cf. p. 88), which gave us several beautiful pots. It seems almost perfectly shaped if seen from the front, but the side view shows that it is somewhat lopsided.

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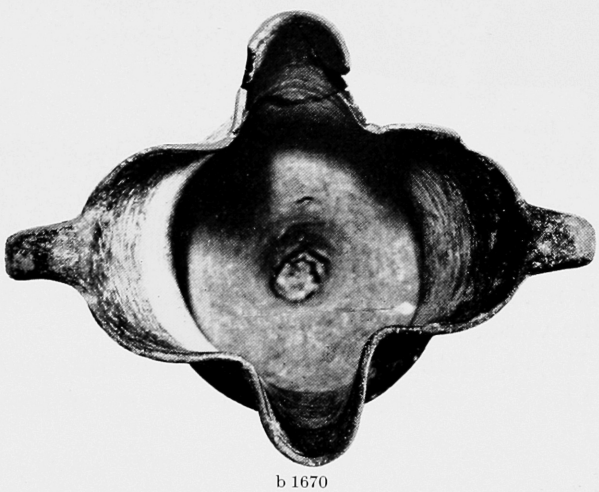
From a solid foot the lower body rises in a graceful diverging curve. Two flat handles extending from the center of the body are raised slightly above the lip. There is some mica in the paste, which is medium to fine and dark gray with light brown surfaces. A smooth brown-red slip, which also contains some mica, covers the exterior and the interior rim; the interior is light brown and granular. Two incised lines, in some places accompanied by a third, encircle the upper body. Chalice b 1676 (cf. Plate XI) is of similar design.

Chalice b 2545 (Fig. 127; cf. Plate XI) was found directly below the fireplace of Section 10 in Level 1 of Complex I. Though it has a peculiar form,[1] several fragments of similar vessels were observed. The light brown surface shows vertical striations left by the polishing-stone.

A number of complete pitchers and a great many fragments occurred at all depths in Stratum II. No. b 2703 (Fig. 128; cf. Plate XII), which was uncovered in the level with cuneiform Tablet b 2700 in Plot J 33, is typical (cf. p. 105). The pointed oval body is contracted below



b 1670

Fig. 126.—Top View of a Chalice. Scale, 1:3

b 2545

Fig. 127.—Small Chalice. Scale, 1:2

the neck, which ends in a clover-leaf orifice with broad "cut-off" bill-spout. The granular surface is light yellowish brown and grayish brown. On the exterior the wheel marks are almost wholly obliterated by vertical striations left by the wooden paddle(?). Half the interior is blackened; the rest is light brown. There are pronounced wheel marks on the interior. Pitcher b 2805 (Fig. 128; cf. Plate XII) differs from the type just described in having a ring bottom and a longer bill-spout. Pitcher b 1424 (Color Plate IV; cf. Plate XII) has an extremely long vertical bill-spout. Its color is an unusual reddish buff with much powdered mica. A part of the lower body is decomposed as a result of its proximity to Skeleton b X24 in the burial chamber of Complex I.

A series of small pitchers includes Nos. b 1081, b 1427, and b 1674, all illustrated in Figure 129 (cf. Plate XII). No. b 1081 is one of the few handmade pots of Period II. Its clover-leaf orifice and general form are frequent in this stratum; but the surface treatment is somewhat unusual. Here, as in the case of Bowl b 2532 described above, a polishing-stone was used in smoothing the exterior. A brown-red wash covers the exterior; the interior is light brown. Pitcher b 1427 was a mortuary gift of Skeleton b X23 in the burial chamber of Complex I. The orifice, in contrast to those of the other two pitchers of this series, is circular. The light red-

[1] Identical with a vessel from Kül Tepe, Plate XVIII 3 in Hugo Grothe's *Meine Vorderasien-Expedition*, Vol. I.

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brown wash contains much mica. Pitcher b 1674, though it agrees closely with the form of No. b 1081 above, has two handles, one secondarily attached to the left of the original handle, and a two-lobed orifice. The exterior is a smooth golden brown. It is ornamented with two grooves on the upper body and two small "breasts" applied above the point of greatest diameter.

b 2703 b 2703 b 2805

FIG. 128.—TOP AND SIDE VIEWS OF PITCHER b 2703 AND SIDE VIEW OF PITCHER b 2805 (RECONSTRUCTED). SCALE, 1:4

A larger pitcher, No. b 2528, is diagramed in Plate XIII. The reconstruction of its neck is based on similar fragments of this type. The exterior surface is red-brown with some powdered mica and was smoothed by a polishing-stone. Two ornamental grooves encircle the upper body. Fragments of almost identical pitchers with high bill-spouts instead of a circular orifice were also uncovered (cf. No. b 2527 in Plate XIII). Compare also other spouts shown in Plate XIII.

b 1081 b 1427 b 1674

FIG. 129.—SMALL PITCHERS. SCALE, 1:3

The remaining pitcher forms are rare or unique. No. b 1675 (Fig. 130; cf. Plate XII) has a loop handle, large enough for one finger only, opposite a broad, elevated bill-spout. The exterior is covered with a smooth red-brown slip; the interior is light brown and granular.

Pitcher b 1671 (Fig. 131 and Color Plate IV; cf. Plate XII) is flattened and was perhaps used like a canteen. The elevated bill-spout is rather crudely modeled. The surface color is the customary light brown of Alişar II pottery.

The two most pleasing pitchers were mortuary gifts in the communal burial chamber of Complex I. Pitcher b 1425 (Color Plate III; cf. Plate XI) was with Skeleton b X24. Its form, color, and surface treatment make it one of the most beautiful vessels so far discovered at the

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mound. The graceful elongated body merges into a solid foot which is slightly concave at the bottom. The lateral spout has a broad base and ends in a small bill. The handle is laterally flattened. The paste is medium to fine and light brown. Regular marks of the polishing-stone are visible on the lower exterior, which is coated with a highly polished brown and brown-red slip applied over the brown granular ground. The interior and the bottom of the foot are brown; there are pronounced wheel marks on the interior. This vessel, like Pitcher b 1424 (cf. Color Plate IV), has suffered by its proximity to the decomposing body of the person it accompanied. One half of it is disintegrated to such an extent that the paste is exposed.

b 1675

Fig. 130.—Pitcher with Loop Handle (Reconstructed). Scale, 1:3

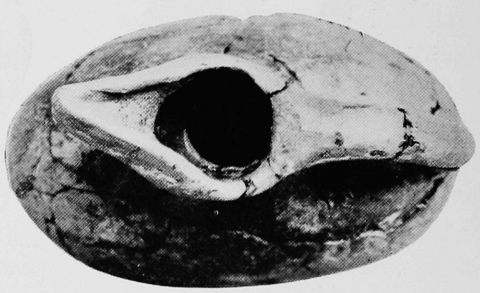
Pitcher b 2544 (Fig. 132; cf. Plate XII) was with Skeleton b X28. The long, broad, cut-off bill-spout is gracefully curved and supplied with a strainer. There are two breastlike protuberances on the upper body. The highly polished exterior has a brown-red slip and shows striations of the polishing-stone.

An oddly shaped small pitcher, No. b 2010, is illustrated in Figure 133 (cf. Plate XI). It is only .129 high, including the extraordinarily clumsy spout. A flat knob is attached to form the bottom. The exterior is brown-red and smooth, whereas the interior has the usual light brown surface color.

A unique pitcher, No. b 2536 (Fig. 134; cf. Plate XII), occurred in Plot EE 10 on the western edge of Level 1 in Complex I. Though Period I remains were frequent around its find-spot, the pitcher certainly belongs to the Alişar II fine red ware and is closely related to the beautiful Bowl b 2806 (cf. Color Plate II). The part of the orifice opposite the graceful handle is somewhat raised. The uniformity of the vessel wall and the regularity of its form suggest that the vessel is wheelmade, though no wheel marks could be distinguished. The exterior and lip are red-brown and highly polished; the interior is brown. Some powdered mica is present. The distinct marks left by the polishing-stone have an ornamental effect. They are vertical on the neck and horizontal on the body.

Two other pitchers are shown in the line drawings: No. b 1307 on Plate XI and No. b 1325 on Plate XII.

A large jug (b 2738, Fig. 135; cf. Plate XI) was uncovered in Plot J 33 a few meters from the find-spot of cuneiform tablet No. b 2700 (cf. p. 105). The height of the jug is .915. Its good preservation is due to its strong walls, which are more than .02 thick at an average. One vertical handle which extended from the lip opposite the spout to the upper body is missing. Two smaller vertical handles, one fragmentary, are on either side. The squared-off bill-spout indicates its character as a container for liquids, and the small flat bottom and the abraded lower body show that it was set in the ground. The surface is granular where the polishing-stone has not left its regular vertical striations. Though no wheel marks are preserved, it is hard to believe that the exceedingly well modeled vessel is handmade. A light brown wash with light red-brown shades covers the upper body; the ground color is light brown.



b 1671

Fig. 131.—Top View of a Pitcher. Scale, 2:5

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Three small jars are illustrated in Figure 136 (cf. Plate XIII). Jar b 1070 represents the typical form, to judge from fragments. The pointed bottom is somewhat ground off by use. The paste, as usual, has a gray center with light brown surfaces. The granular exterior has a yellowish brown wash, with buff shades, which contains much mica. The interior is light gray-

b 2544

FIG. 132.—HANDLE, TOP, AND SIDE VIEWS OF ELABORATE PITCHER. SCALE, 1:4

b 2010

FIG. 133.—FRONT AND SIDE VIEWS OF ODDLY SHAPED SMALL PITCHER. SCALE, 1:2

brown. Jar b 2803 has the usual light brown granular surface. Its pointed body ends in a knob at the bottom. Jar b 2734 has three pointed knobs, one at each side and one opposite the handle, a little above the point of greatest diameter. The exterior is coated with a red-brown wash.

No. b 1691 (Fig. 137; cf. Plate XIII), one of two almost identical handleless jars, stands on a ring bottom. The rim is squared off at the top and at the side. The surface is granular, like

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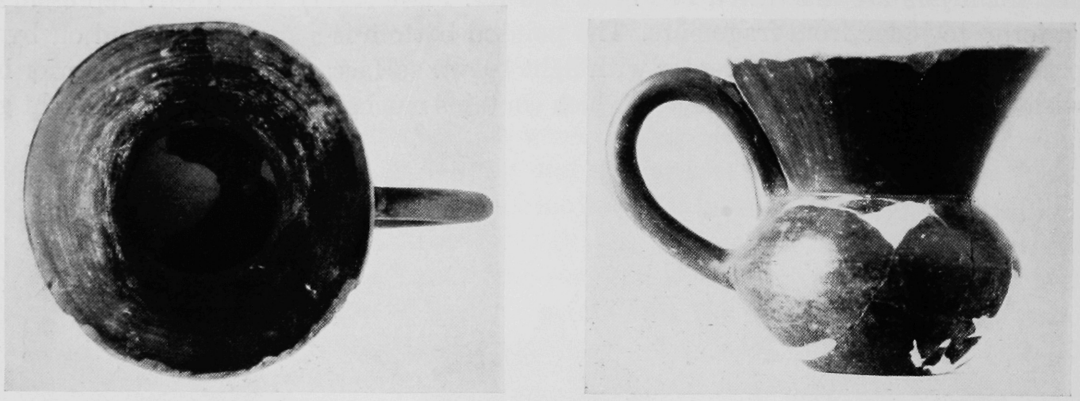
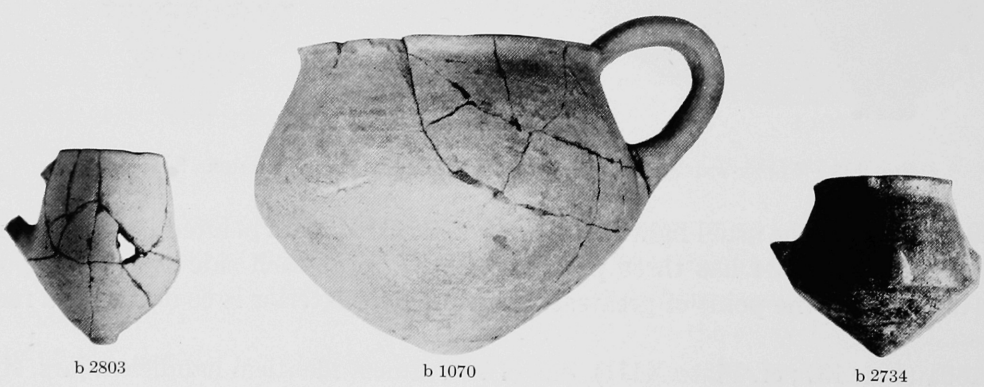


b 2536

FIG. 134.—TOP AND SIDE VIEWS OF SMALL PITCHER. SCALE, 1:3

b 2738

FIG. 135.—TOP AND SIDE VIEWS OF LARGE JUG. SCALE, 1:12



b 2803 b 1070 b 2734

FIG. 136.—SMALL JAR b 2803, TYPICAL JAR b 1070, AND SMALL JAR b 2734. SCALE, 1:4

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that of most unpolished vessels of Period II. It has the usual light brown color, in some places rather reddish brown.

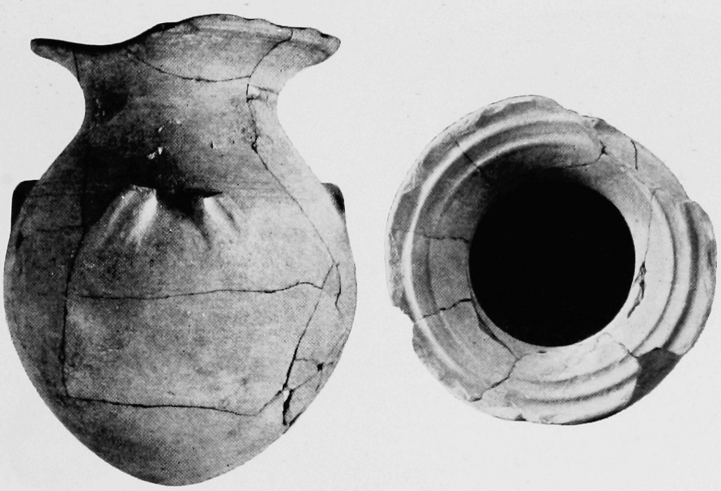
No. b 1677 (Fig. 138; cf. Plate XIV) is a typical cooking-pot. It was found in the "kitchen" (Section 4, Complex I) with other vessels of identical or similar shape. The exterior surface has a light gray-brown wash or slip, over a light reddish brown; and the round, somewhat flattened, bottom is blackened by use over the fireplace beside which the vessel stood.

b 1691

FIG. 137.—HANDLELESS JAR. SCALE, 1:4

b 1677

FIG. 138.—COOKING-JAR. SCALE, 1:8



b 2546

FIG. 139.—SIDE AND TOP VIEWS OF STORAGE JAR. SCALE, 1:8

No. b 2546 (Fig. 139; cf. Plate XIV), one of a group of storage jars found above the Complex I burial chamber, has two laterally compressed solid knobs and two horizontal handles. The rim is elaborated by two steps on the interior, and three grooves encircle the upper body.

The general form of Jar b 2801 (Fig. 140; cf. Plate XIV) resembles that of No. b 2546. It has two vertical knobs and two vertical handles. The projecting rim is convex on top. The surface is light brown, decorated with diagonal bands connecting horizontal bands. The outlines of the pattern are vague, since the color was spread by the polishing-stone.

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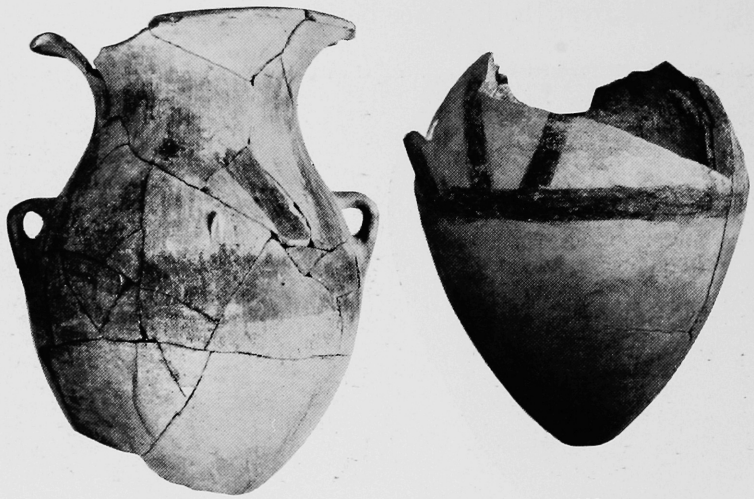
A fragmentary vessel (b 1308, Fig. 140; cf. Plate XIV) occurred .20 below the mound surface in Plot EE 10 (Complex I). Form and decoration were similar to those of Jar b 2801, though this jar had but two handles. Since no wheel marks are visible, it may be handmade, though jars of the same form were built on the wheel. A sediment consisting of hard, light gray ma-



b 2801 b 1308

Fig. 140.—Storage Jars with Crude Painted Decoration. Scale, 1:8

b 2550

Fig. 141.—Storage Jar. Scale, 1:16

b 2543

Fig. 142.—Storage Jar Used as a Burial Urn. Scale, 1:8

terial, .015 thick at an average, covered the interior surface. Apparently it had been applied purposely in successive coats, though it may be explained less plausibly as a deposit from the substance once contained in the vessel.

A typical large storage jar is represented by No. b 2550 (Fig. 141; cf. Plate XV). Its height is 1.025. The small, rather solid foot had been set in a depression in the floor, suggesting that the vessel was meant to be stationary. The granular surfaces are light brown. Eleven jars of

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this general type were uncovered in the storeroom (Section 1) of Complex I. Some have two ring-shaped ornaments at opposite sides below the rim.[1]

Some jars which were primarily storage jars for household use were found, in the burial chamber of Complex I and elsewhere, pressed into service as burial urns. These were usually of the type of Jars b 2546 and b 2801 described above. Thus No. b 2543 (Fig. 142; cf. Plate

b 2549 b 2548

FIG. 143.—BURIAL URNS. SCALE, 1:16

XIV) was the burial urn of Skeleton b X36 in Plot CC 19. The bottom is small and slightly convex. Four rounded triangular handles, alternately vertical and horizontal, are distributed at equal distances. The upper part of the light brown exterior is coated with a red-brown wash. Two ornamental grooves encircle the body above the handles.

Large jars with broad flat bottoms seem to have been used as burial urns only. Burial Urn b 2549 (Fig. 143; cf. Plate XIV) contained Skeleton b X22 in Plot DD 20 (Complex II). It stands .778 high. It is a crudely built handmade vessel. Two horizontal, somewhat elevated, rounded triangular handles are on opposite sides of the upper body. The color is light brown with reddish shades in places.

In Urn b 2548 (Fig. 143; cf. Plate XIV) Skeleton b X44 was found. The vessel is .74 high. It has four round vertical handles and a broad flat bottom. This jar also is handmade, and the marks of the polishing-stone are distinct. The color is light brown with brown and red-brown in parts. Firing clouds are visible on the exterior.

b 2541

FIG. 144.—ORE LADLE. SCALE, 1:3

An ore ladle, No. b 2541 (Fig. 144; cf. Plate XV), shows traces of green copper oxide on the bottom and sides of the interior. The crude, handmade, shallow bowl has a spout; and a handle extends downward from one side and expands at the end. Neither form nor paste indicates that the ladle belongs to Period II, but it is dated by the frequency of Period II objects in its find-level (Plot Y 7, depth 3.50).

An odd-shaped vessel fragment (b 1227, Fig. 145; cf. Plate XV) stood on the floor of Section 9 in the almost sterile storehouse of Complex II. It has a rectangular body with sharp

[1] See *OIP* VI 189 f. The large storage vessel uncovered in Plot XXV and attributed by us to a later period belongs, as we now know, to Period II.

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shoulder and a cylindrical neck (missing). A brown-red wash or slip, chipped off at many spots, covers the light brown exterior. The vessel is handmade and rather crude.

A unique object of problematical use is No. b 2530 (Fig. 145; cf. Plate XV). There is a hole .055 wide in the bottom; an oval perforation (.07×.061) at one side is opposite a third large opening (.112×.045). Two grooves encircle the vessel below the rim. The color is light brown; the surface, granular.

A hollow cylinder (b 2524; cf. Plate XV) was among the vessels deposited above the burial urns in Section 9 of Complex I. The surface is light reddish brown and granular.

b 1227 b 2530

FIG. 145.—VESSEL b 1227 WITH RECTANGULAR BODY AND No. b 2530 WITH PERFORATIONS. SCALE, 1:4

MISCELLANEOUS OBJECTS

The puzzling clay "cakes," occurring in great numbers in this stratum, are as typical for Alişar II as the vessels, the seals, and the cuneiform tablets. There are also miniature "cart wheels" of fired and unfired clay; pottery "handles" which are typical guide specimens; star-shaped pottery objects; pottery spools, tubes, loom weights, and tablets; ornamented balls; a mold; and other objects of pottery and clay. All these objects indicate the variety and fertility of the Alişar II culture.

"Cakes" is the name we applied to a series of small objects of unbaked or slightly baked clay modeled in forms of disks, cones, and stars. Some are plain, others are ornamented with nail prints, points, and, less frequently, small "sun" symbols (Figs. 146–47). Their colors range from gray to light yellowish brown; their diameters, from .011 to .048. We do not yet have an explanation for their use, but it seems certain that they had no utilitarian purpose. Possibly they were votive objects.

There are "cakes" in the form of slightly conical disks with plain or scalloped edges and ornamented with nail prints which are arranged promiscuously, in straight rows, or in irregular concentric circles (e.g., b 2688 and b 818, Fig. 146). Another shape with this type of ornamentation is the cone or disk with concave top (b 2209, b 2318, and b 1463). Some cones with truncated depressed tops show dotted ornamentation, sometimes supplemented by radiating incisions on the margin (b 720 and b 967). Many "cakes" of this shape are plain (e.g., b 2440); others show incisions suggesting rotating movement (e.g., b 1798). There is also a series of star-shaped "cakes" (b 1438 and b 1539) which have from five to eleven points. An oval "cake" (b 1917) has parallel rows of short dashes following the long axis.

The most interesting clay "cakes" are those with impressions of sun-shaped symbols (Nos. 1404–6, Fig. 147). They have the usual conoid form with depressed top and plain or scalloped

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edge. No. 1404 has rotating incisions. The sun symbols vary in number and arrangement. The three specimens illustrated were found together in Pit 4 of Plot II of 1927 (in GG–HH 13). Since such pits seem to have been used primarily as storage places, it is possible that these

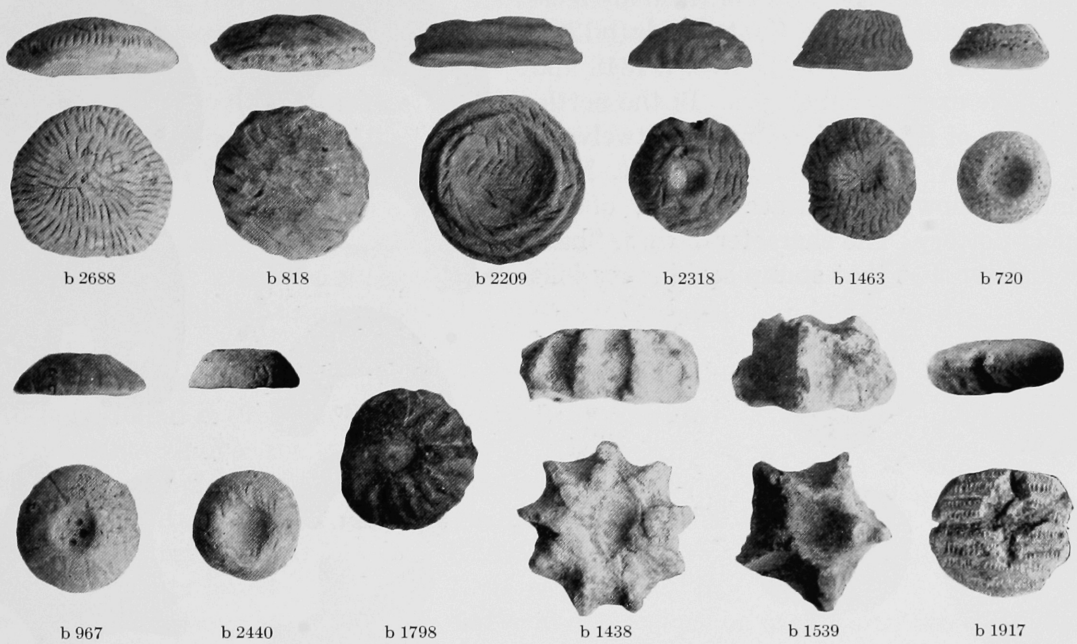

Fig. 146.—Clay "Cakes." Scale, 1:2

Fig. 147.—Clay "Cakes" with "Sun" Symbols. Actual Size

"cakes," and perhaps the others also, had some magical purpose for the preservation, or more probably for the obtaining, of the provisions stored in the pit.

The unbaked or slightly fired clay "cart wheels" (b 2009 and b 1937, Fig. 148) remind one of the wheels of the miniature chariot of Kish.[1] They are not perforated, but there is a depression

[1] S. Langdon, *Excavations at Kish* I (Paris, 1924) 67 and Plate VII 3.

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at one side of the "hub." Six "cart wheels" were found in Stratum II; and one was found in the next to the top sublevel of Stratum I (Level 8) in Plot L 14.

Pottery "handles" (Fig. 149) are guide specimens for Alişar II. Nearly all of them are crescent-shaped with blunt, perforated ends (b 1261, b 1197, b 2329, and b 1371). Nos. b 1348 and b 1491 have exceptional shapes. In the northwest corner of Section 7, Complex I, twelve of these "handles" were found at one spot. Most specimens show the surface typical of the Alişar II pottery. The character of these "handles" and the fact that stamp seal impressions

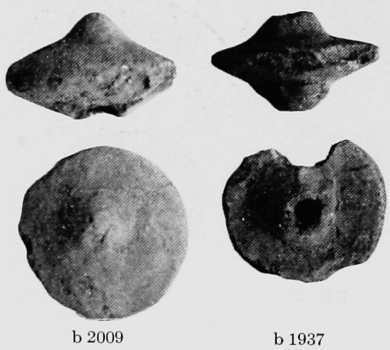

FIG. 148.—"CART WHEELS" OF CLAY. SCALE, 1:2

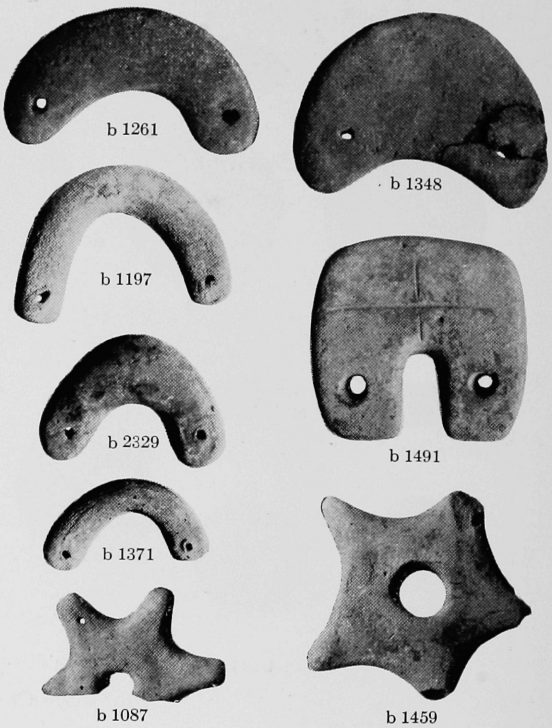

FIG. 149.—"HANDLES" AND "STARS" OF POTTERY. SCALE, 1:4

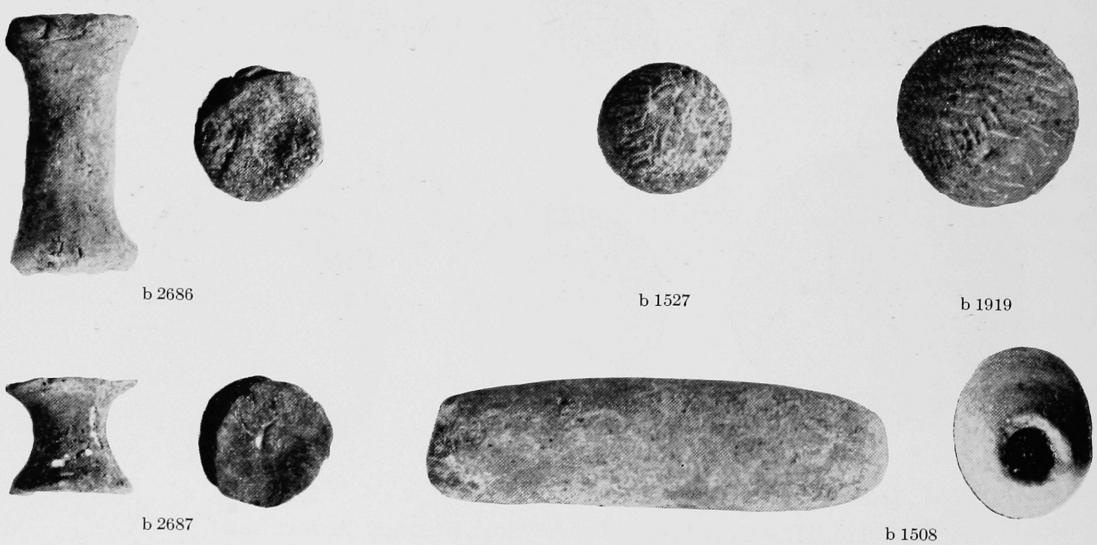

FIG. 150.—CLAY "SPOOLS," A POTTERY TUBE, AND POTTERY BALLS. ACTUAL SIZE

occurred on some of them (cf. p. 150) suggests that they were used in some way in connection with merchandise, perhaps actually as handles (grips?) of packages.[1]

[1] It has also been suggested that they may be loom weights.

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Pottery "stars" (b 1087 and b 1459, Fig. 149) show again the typical Alişar II ware. All of them have a large perforation in the center; and in two cases small holes were noticed in one of the points, perhaps for suspension. Since one or more points are always missing, the question is open whether each "star" had a perforated point. The number of points ranges from four to six.

Five spool-shaped objects like Nos. b 2686 and b 2687 (Fig. 150) were found in Stratum II. All were of unbaked or slightly fired clay. There is no indication as to the use of these objects.

Two tubes were found close together in the Period II upper level of Plot FF 11. One was of clay. No. b 1508 (Fig. 150) is baked and has the light brown granular surface of Period II pottery.

Small pottery balls (b 1527 and b 1919, Fig. 150) are similar to those found in Stratum I, but are simply ornamented with nail prints all over the surface.

Only two examples of the usual kind of so-called "loom weight" occurred in Stratum II. Only their find-spot marks them as belonging to Period II. No. b 1825 (Fig. 151) resembles fragments found in Stratum I. It is light gray in color and has a groove along its edge and oval depressions on each broad face. No. b 2287 could occur in any layer as late as Stratum IV. It is dark gray, perhaps blackened by fire, and has the form of a flat oval.

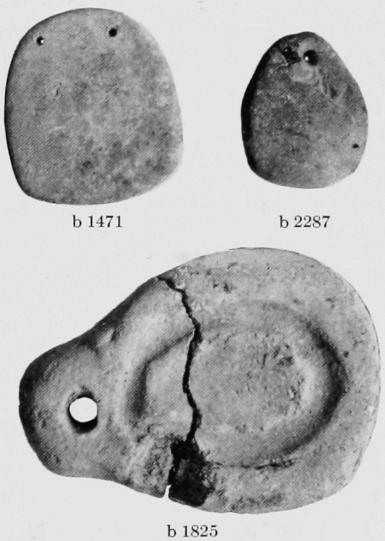

Fig. 151.—A Tablet and Loom Weights of Pottery. Scale, 1:3

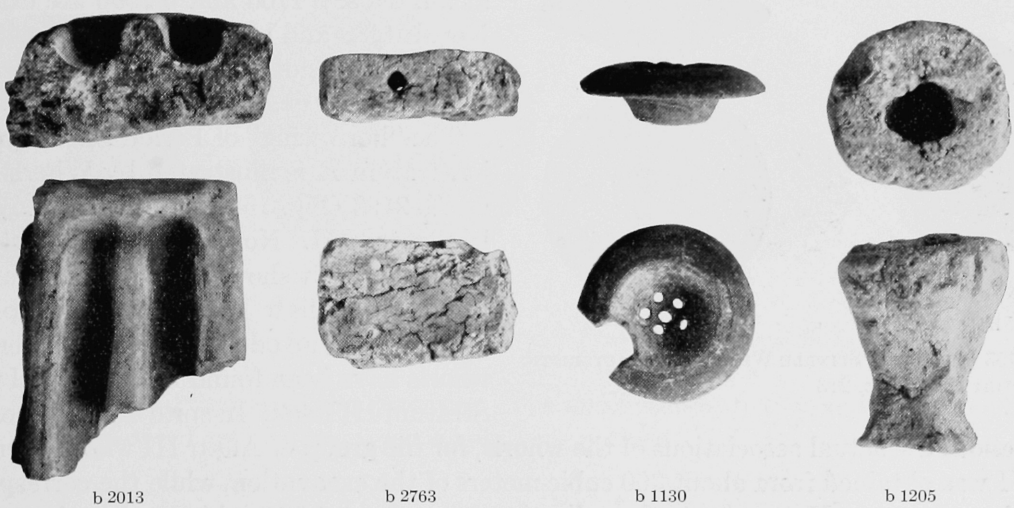

Fig. 152.—Miscellaneous Objects of Pottery and Clay. Scale, 1:2

Pottery tablet No. b 1471 (Fig. 151) is of typical Period II ware, gray-brown and granular. It has two small perforations. Two other tablets of the same type were found in this stratum.

No. b 2013 (Fig. 152) is a fragment of a pottery mold with two grooves and traces of a third. The originally gray-brown surface is discolored by fire, and one groove is coated with a dark gray substance. Compare pottery mold No. b 1613 and stone mold No. b 1693.

A rectangular clay object (b 2763, Fig. 152) occurred in the find-layer of cuneiform tablet

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No. b 2700 in Plot J 33 (cf. p. 105). It is light grayish white and perforated through both axes. Another clay object (b 1205, Fig. 152), resembling a miniature pot, is solid except for a shallow depression at the top. No. b 1130 (Fig. 152) is an interesting strainer lid. It has an opening in the rim, apparently to leave space for the handle of the vessel on which it was used.

Pottery figurines, both anthropomorphic and zoömorphic, and pottery seals, will be described in the sections on figurines and seals.

SPINDLE WHORLS

It has been stated above (p. 80) that the people of Alişar II failed to produce spindle whorls which could compare in neatness with the whorls of Periods I or III. The presence of Alişar I and III whorls in Stratum II deposits indicates that spinning was done there. Were the spinners Alişar II women or natives?

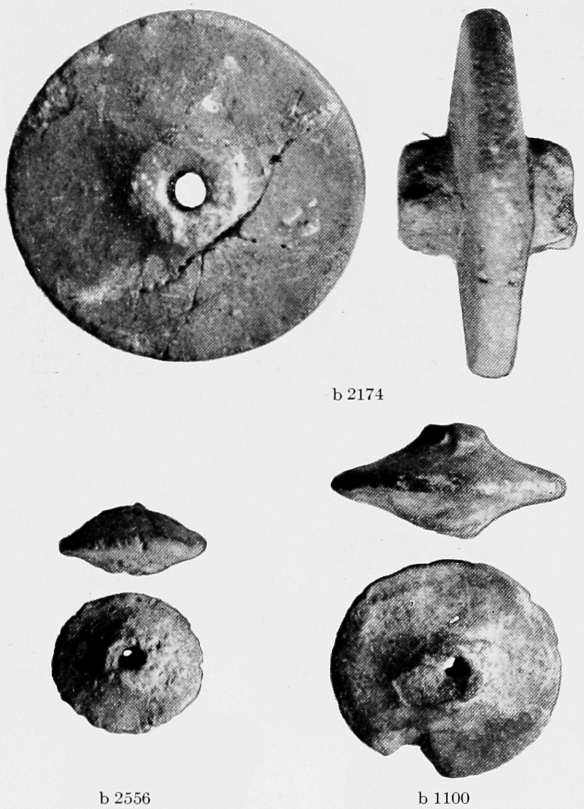

FIG. 153.—POTTERY SPINDLE WHORLS CHARACTERISTIC OF STRATUM II. SCALE, 2:3

POTTERY

Two crude types of pottery whorls may be considered characteristic of Stratum II. The more frequent is a "cart wheel" perforated through the center, in contrast to the clay "cart wheels" described above (p. 122). The best specimen of this is No. b 2174 (Fig. 153), light reddish brown with protruding "hub." Nearly all the other "cart wheels" are exceedingly crude, and some of them are hardly fired at all. Nos. b 1100 and b 2556 are examples. Nos. b 1488 and b 1316 are whorls with scalloped edges (not illustrated). They resemble some "cakes" described above.

The "borrowing" of Period I pottery whorls in Stratum II is illustrated by Whorls b 2008 and b 2163 (Fig. 154), typical of many found in Stratum II. No. b 2163 is interesting for the fact that it shows the typical ornamentation of the Alişar I stone whorls applied on pottery. It is an odd fact that more Period III whorls have been found in Stratum II than in Stratum III itself. In spite of that, there is no doubt about the actual associations of the whorls, for the group of Alişar III whorls from Stratum III was obtained from about 300 cubic meters of the excavation, while the corresponding group from Stratum II represents the collection from about 4,000 cubic meters of remains.

Whorl b 2761 (Fig. 154), showing plainly the form and ornamentation of Stratum III whorls, was associated with Period II deposits.

Other whorls found in Stratum II were conical, e.g., No. b 1260; biconical, e.g., No. b 1799; semiglobular, e.g., No. b 2580; annular, e.g., No. b 1615; and tubular, e.g., No. b 1979 (all in Fig. 154). These shapes all occur more or less frequently in all the strata of the mound.

STONE

There is little difference between the stone whorls from Stratum I and those from Stratum II. Forms and ornamentation are alike. However, there is a curious fact concerning the find-

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data. According to all considerations, we should expect to find Period I whorls in the lowest Alişar II level only; but there were more Period I whorls definitely associated with the

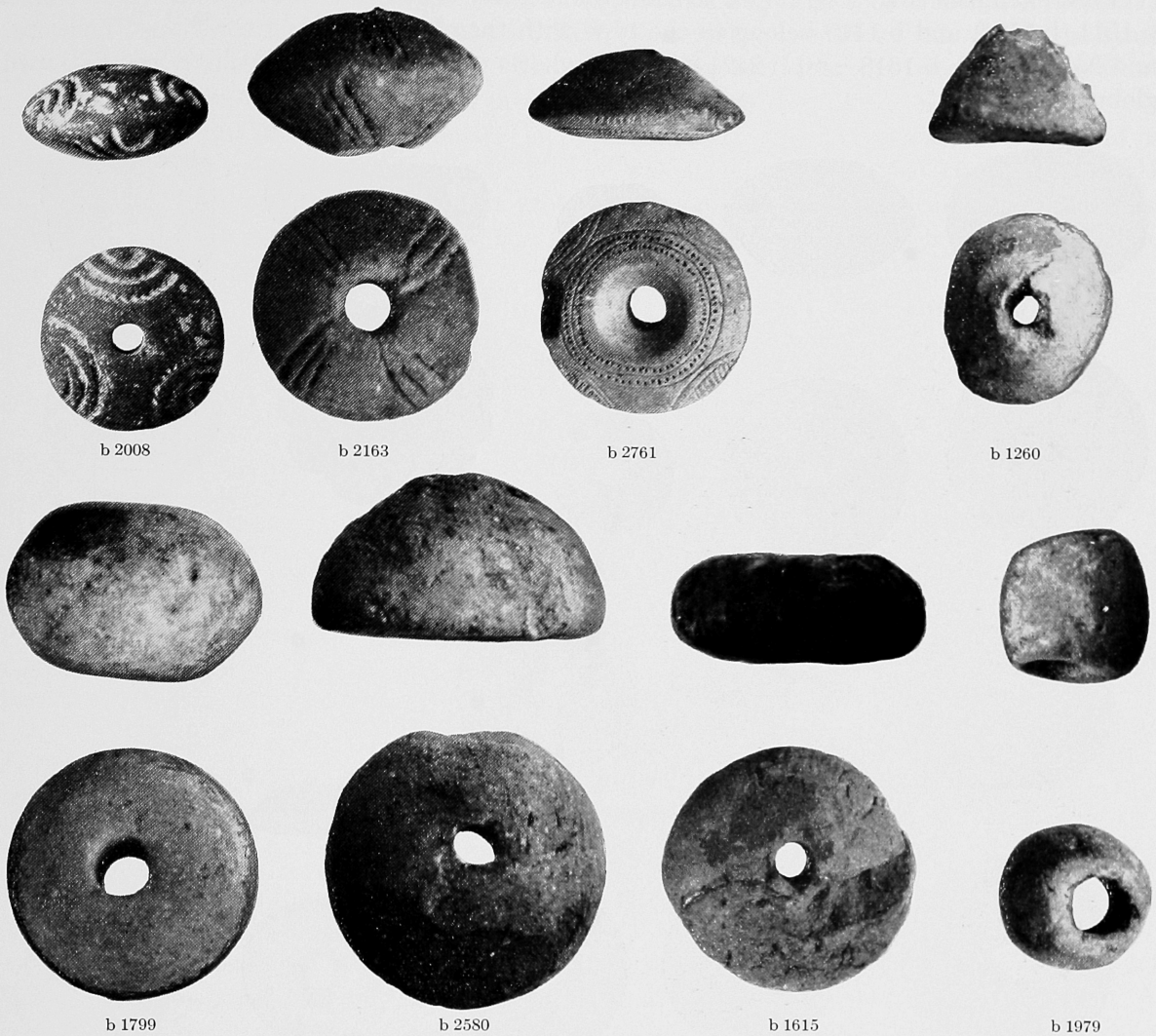

Fig. 154.—Pottery Whorls Found in Stratum II. Actual Size

Period II upper level than with the lower one. The series runs as follows in Complexes I and II and at other spots where the two main levels were noticed:

Level 1	15 Period I whorls
Intermediate level 1–2	5 Period I whorls
Level 2	10 Period I whorls
Doubtful	8 Period I whorls

The series of Period III whorls, on the other hand, runs true to our expectations:

Level 1	10 Period III whorls
Intermediate level 1–2	2 Period III whorls
Level 2	2 Period III whorls
Doubtful	4 Period III whorls

At present we must consider the find circumstances of the Period I whorls in Stratum II as one of several archeological freaks. That it is impossible that Alişar I was contemporaneous

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with Alişar II to the very end of the latter period is indicated by sufficient cross-finds of Alişar III in Stratum II.

A few examples (Fig. 155) suffice to show the identity of Alişar I and II stone whorls: Nos. b 1511, b 1506, and b 1115 belong to the type with the characteristic cross-shaped incisions; and Nos. b 1642, b 1618, and b 2421 are plain whorls with biconical, lenticular, and flattened globular forms.

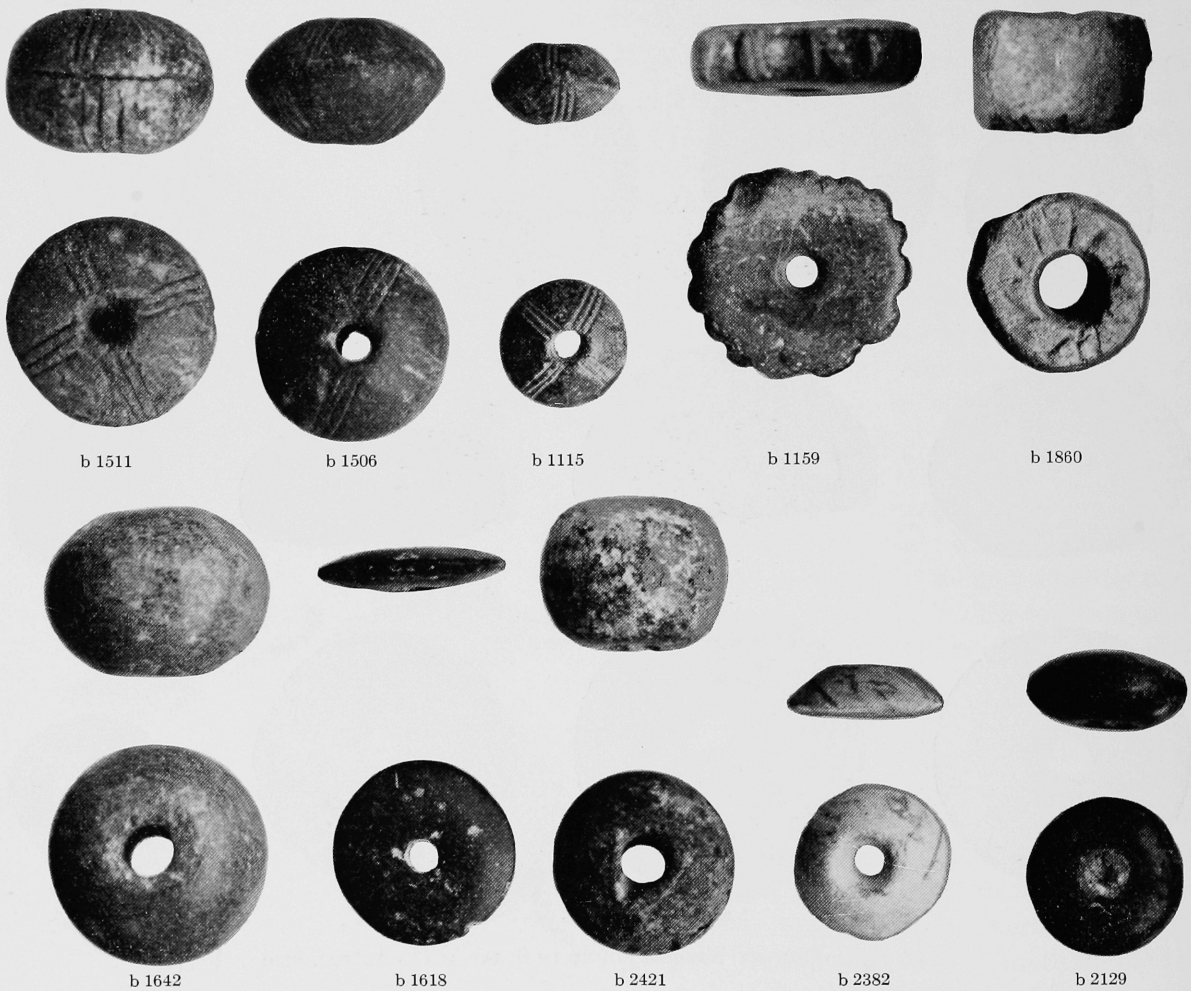

Fig. 155.—Stone Whorls Found in Stratum II. Actual Size

Whorl b 1159 with scalloped edge and the cylinder No. b 1860 are, so far, unique specimens of Period II.

Conical whorls of the type of No. b 2382 (Fig. 155) are characteristic for Period V, but this particular specimen of white marble-like stone occurred in Stratum II.

The gray-black and highly polished Whorl b 2129 (Fig. 155), elliptical in cross-section, is of serpentine. The fact that the perforation is filled with hard whitish material suggests a purpose other than that of a spindle whorl.

GLAZED(?) FRIT

We are certain that three frit whorls are of Period II workmanship, although they were found in Stratum III. No. a 891 (Fig. 156) was definitely associated with Stratum III in Plot

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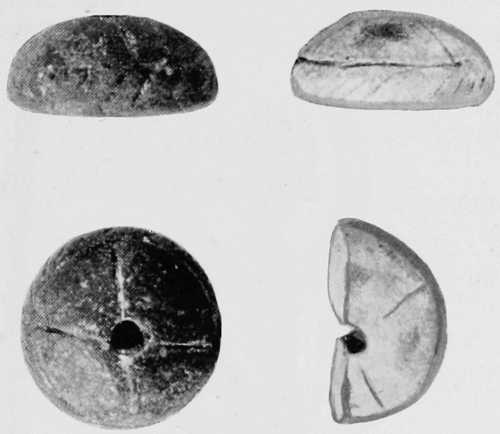
L 14. It is smooth, somewhat granular, with a cross-shaped incision inside a circle on the conoid top and a band with oblique dashes at the side, and shows traces of the original light bluish green glazy coat on the grayish white surface. No. a 563 (Fig. 156) occurred in Alişar III refuse at the base of the outer front of the Alişar IV citadel wall in Plot P 13. It has the same form and ornamentation as No. a 891. Though it is blackened by fire, there are iridescent patches; its original surface color was probably the same as that of No. a 891.

Whorl b 564 (not illustrated), identical as to form and incised ornamentation, was found in Plot AA 16, 1.10 below the surface, where there was a mixture of Period II and Period III sherds. It too is coated with a bluish green glazy substance; in addition a black-brown band encircles the incised margin, and a patch of the same color is in each quadrant on top. For further discussion see pages 179 f.



a 563 a 891

Fig. 156.—Glazed Frit Whorls, Probably of Period II Origin. About Actual Size

FIGURINES

In Stratum II we found representations of human beings, both men and women, in lead and pottery;[1] shoe figurines of pottery; heads of animals, perhaps originally parts of entire animal figures or spouts and handles of zoömorphic vessels; and small clay and pottery figurines of sheep and other animals. Some potsherds show human beings, or parts of them, in relief. We were fortunate in finding two molds which show how many of the figures may have been made. The lead figures were most elaborate, those of clay the most numerous.

ANTHROPOMORPHIC FIGURINES

Lead

All three lead figurines so far uncovered were found in Complex I. Both Nos. b 1445 and b 1599 (Fig. 157) occurred in the upper level of Plot FF 10; No. b 1599 lay just west of Section 9, while No. b 1445 was found higher up, in the top refuse above the floors. No. b 2243 (Fig. 157) was uncovered in Section 4 of the second level.

Figurine b 1445 is the most interesting representation of an "Ishtar"[2] or fertility goddess yet found at Alişar, except for an ivory head (No. 1967) found in 1927.[3] The semi-circular headdress or crown has five disk-shaped ornaments along the margin, with a sixth disk in the center. Long eyebrows, meeting in the middle, are above large oval and somewhat protruding

[1] [Some stone figures also seem to have been found, but have not been described.—Editor.]

[2] Cf. W. Andrae, "Die archaischen Ischtar-Tempel in Assur," *WVDOG* XXXIX, especially Plates 51 f.

[3] See *OIP* VII 37.

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eyes. The ears, the nose, and the small mouth are well modeled. The chin is not marked, unless we consider the uppermost of five necklaces as the chin line. The head fades into the disproportionately long neck. The upper body is nude, and the position of the arms indicates that the hands, though not marked, are meant to hold the breasts. The dress is fastened below the breasts and extends almost to the feet. It is marked by lines which form an angular pattern and by a fold extending from the left breast downward. The feet stand on a pedestal.

Figurine b 1599 shows the head of a bearded man or divinity. The headdress is in the form of a bird. Eyes, eyebrows, ears, nose, and mouth are modeled in the same manner as the corresponding features of No. b 1445, but the ears are unusually large. The beard is squared off. Only parts of the shoulders are indicated. They rest on a crescent (branches, wings, or raised arms?) with hatchings like those on the remaining parts of the figure. The crescent, in its turn, rests on a narrow trunk divided by a central line. At either side there is a bird in flight, with a branch(?) below each. This figure too has a small pedestal.

b 1445 b 1599 b 2243

Fig. 157.—Anthropomorphic Figurines of Lead. Actual Size

No. b 2243 is apparently a somewhat phallic representation of a man. He has the typical conoid headdress, commonly called "Hittite," of the Alişar II figurines. In this case the headdress has a bulbous top (common on later sculptures) above transverse bands of ornament. The eyebrows are missing, but the rest of the face is like that of No. b 1599. There is an indication of a squared-off beard, and a necklace encircles the neck. The breasts are as pronounced as those of the female figurine (b 1445). Markings on the chest suggest ribs or some garment, while an oblique protruding line at the hips may represent a belt. Both arms are broken off near the shoulder. They seem to have extended laterally. The phallic character of the effigy is suggested by a slight elevation. The legs were separated, in contrast to those of the other two figurines; but the lower parts are missing.

Pottery

in the round

There are male and female figurines of clay and pottery; the female figurines are considerably more numerous. Few of these objects are well fired, and many are not baked at all.

No. b 2055 (frontispiece and Fig. 158), a male figurine, is one of the few complete specimens. It is badly fired, brittle, and gray-brown and light brown in color. The conoid hat is ornamented with a disk with a hole in the center, placed in front a little below the peak. This

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typical male headdress is found on other pottery figurines and on the lead Figurine b 2243. The face is highly conventionalized. At either side of the exaggerated nose a disk with a dot in the center indicates the eye. The missing arms were originally outstretched. From below the arms a skirtlike robe diverges toward the broad circular base, concave below. The feet are not marked. A series of vertical incisions, apparently representing an ornamentation of the robe, extends across the front of the figurine. A peculiar feature is a hood or container of some kind on the back, made of two overlapping pieces of clay.

The head of No. b 2058 (Fig. 159), baked and light brown, is very similar to that of No. b 2055. Its hat has the same sort of ornamental disk in front. Seven additional disks encircle the sides and front where the lower edge of the hat might be expected.

No. b 1891 (not illustrated) is comparatively well baked and shows light brown and reddish brown shades. Its head and eyes are similar to those of No. b 2055.

No. 3143 (Fig. 159) is relatively well fired; it is coated with a red-brown wash. The right arm is extended and the left is curved, with the hand resting on the side of the body.

No. b 2242 (Fig. 159), made of almost unbaked gray clay, is somewhat more naturalistic than the other figurines of the series. The eyes, though marked in the same manner as those of the other specimens, have been modeled in the clay instead of made by attaching small disks. The originally large nose is broken. The left hand is preserved; in it is some object apparently held toward the mouth. The edge of the conoid hat is marked by an incision.

Figurine b 2475 (Fig. 159) is somewhat different. It is hatless, and the head is almost globular. The eyes are shallow depressions surrounded by grooves, the nose is large and curved, and the mouth is marked by a long, deep incision. The extended arms and the body fragment form an irregular solid cylinder. There are traces of a red-brown wash or slip over the gray-brown surface. This specimen was found in the topmost layer of Stratum II in Plot J 33.

b 2055

FIG. 158.—MALE FIGURINE OF POTTERY. ACTUAL SIZE

Probably all the female figurines with pronounced sex characteristics, as well as the phallic male figures, are fertility idols. It is significant that four figurines (b 2055–58) were found in one section of the otherwise almost sterile community storehouse(?) in Level 2 of Complex II. Nos. b 2055 and b 2058 represent males. The two female figurines (b 2056 and b 2057) had been deposited at the base of a wall (Fig. 160).

Figurine b 2056 (frontispiece and Fig. 161) is moderately well baked. The surface is light brown and granular, rough in spots. The headdress seems to consist of two broad, crescent-shaped sections joined in a sharp edge which extends from one side of the head to the other. Fragment b 1718 (Fig. 161) is such a hat, ornamented with disks. The depression in front shows how it was worn. This is the typical female headdress, shown in its most elaborate form on the lead Figurine b 1455 and repeated on most of the female figurines. The face of No. b 2056 has two disks for eyes, like that of the male Figurine b 2055. The conical breasts are pronounced. Both arms seem to have been raised. The lower part of the figurine may represent a dress; the base is broad and concave.

Other figurines are very similar to the one just described. No. b 672 (Fig. 161) is more crudely executed. The nose is the only facial detail indicated. The one hemispherical breast preserved has a small depression marking the mammilla. The right arm is curved forward,

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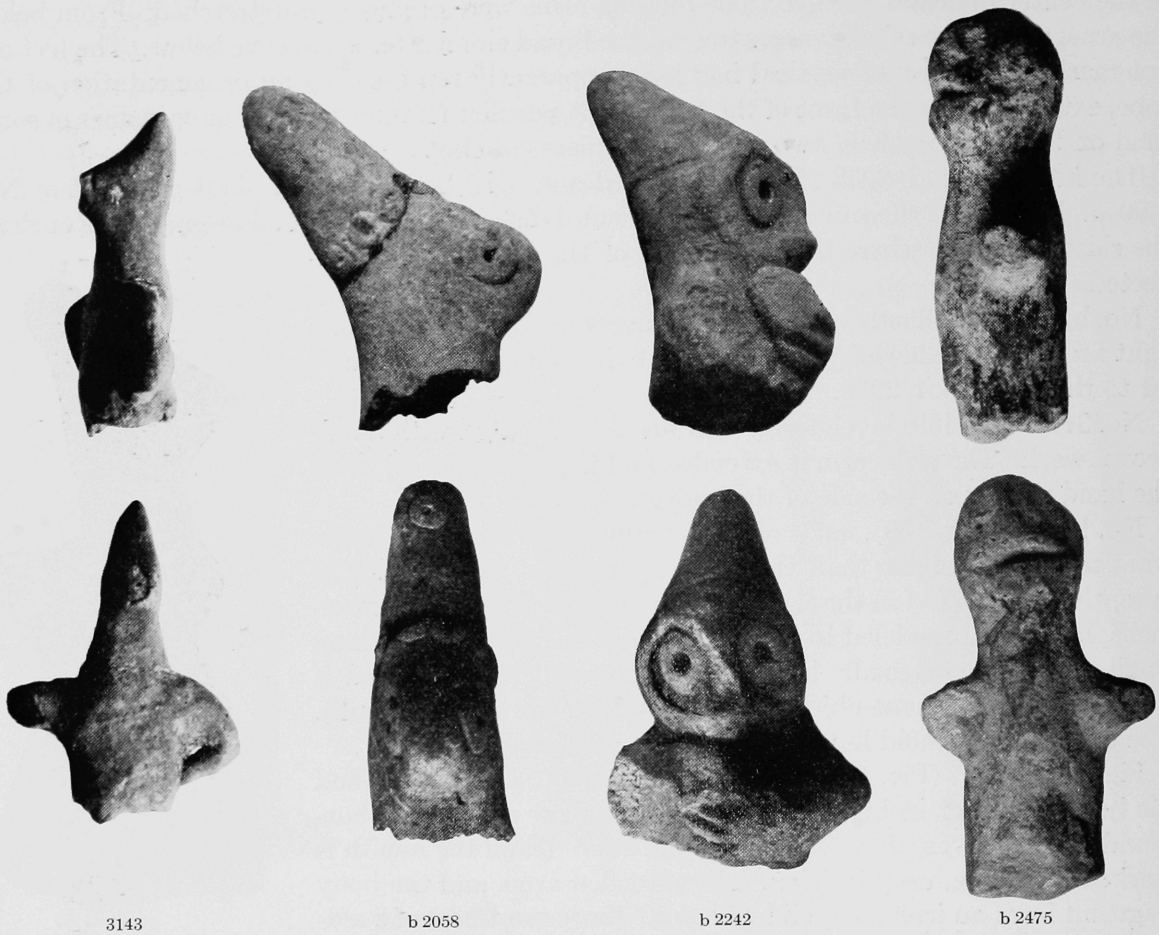
originally perhaps extending to the right breast, if we may judge by other specimens. The left arm clings around an object the top of which is missing. The base is broad, circular, and flat.



3143 b 2058 b 2242 b 2475

FIG. 159.—MALE FIGURINES OF POTTERY. ACTUAL SIZE

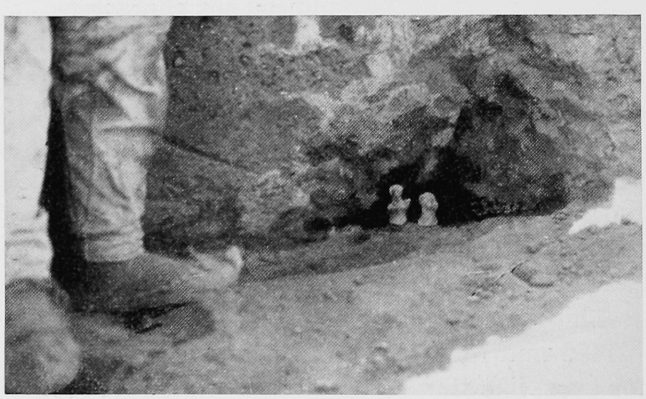


FIG. 160.—FIND-SPOT OF FEMALE FIGURINES b 2056 AND b 2057

The preserved part of No. b 2057 (not illustrated) is identical with the corresponding features of No. b 2056, although its right hand apparently extended to the side of the head in the same manner as that of No. b 2447 (Fig. 161). It seems certain that the stereotyped positions

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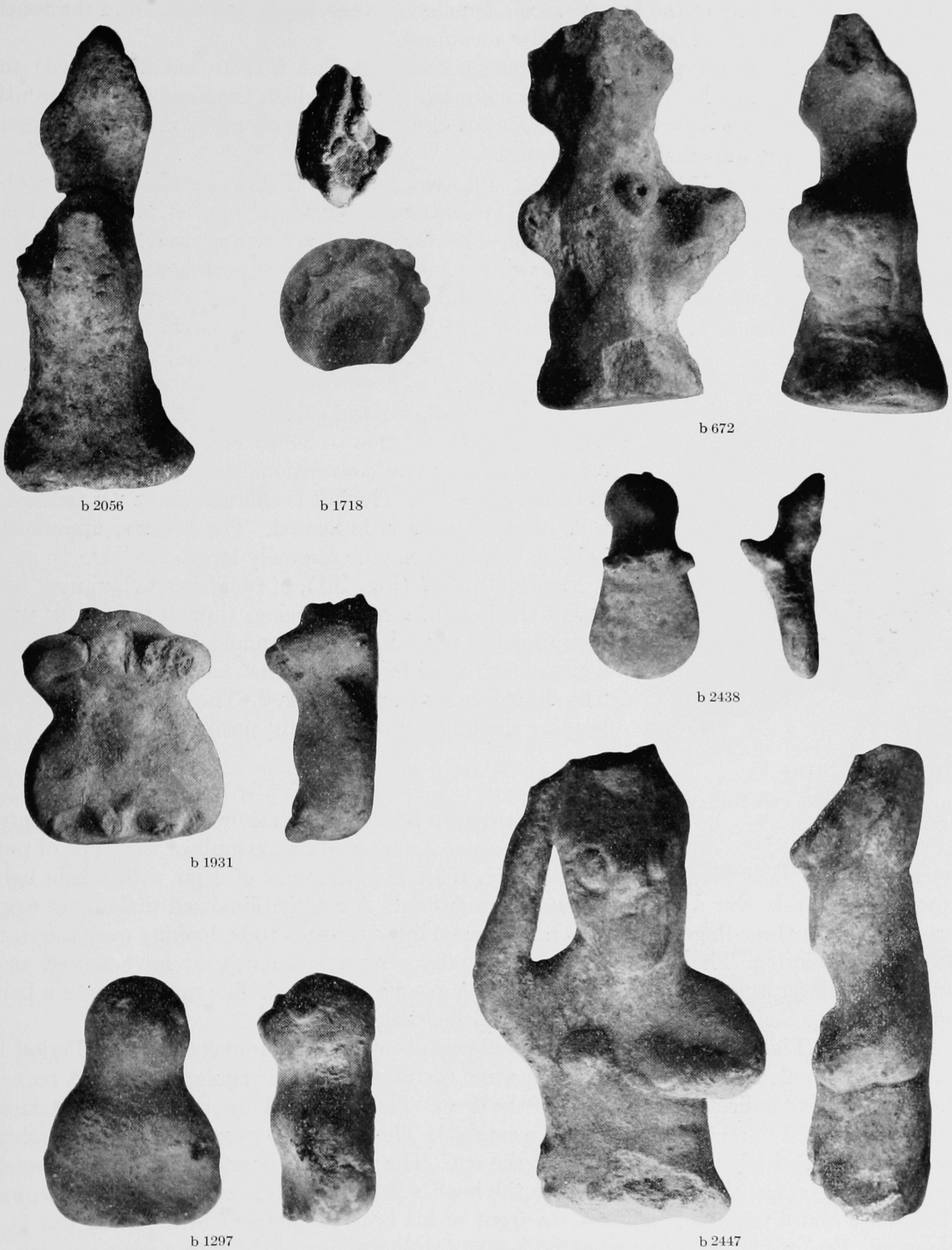

Fig. 161.—Female Figurines of Pottery and Clay. Actual Size

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of the arms and hands, such as the position of the left arm in the male figurines (cf. Fig. 159), the omnipresent holding of the breasts in the female figurines, the raised arms, and the touching of the side of the head, all have definite meanings.

A somewhat different type of female figurine occurs in Nos. b 1930 (not illustrated) and b 1931 (Fig. 161). They have extremely pronounced breasts, which the hands are apparently touching. The bodies are expanded and almost circular; the protruding abdomens suggest pregnancy. The feet are small protuberances.

Figurine b 2447 (Fig. 161), slightly fired and light gray-brown, has a rough and irregular surface. It shows more facial details than the other female figurines. The top part of the head is missing, but it seems certain that the typical headdress was not represented here. The continuation of the high and receding forehead may have marked some arrangement of the hair. The nose is broad and pointed. The eyes are simple disks without central depressions, and surrounded by grooves. The mouth is a faint horizontal line above the extremely long chin. The ears are not marked. The right hand touches the side of the head; the left one covers the left breast. The right breast is semiglobular and slightly conoid.

A crude little figurine (b 2438, Fig. 161) is in the same category as the more conventionalized specimens. It is of unbaked gray clay. The hat is characteristic. Of facial details only the nose is indicated. The breasts, apparently held by both hands, are extremely large.

Figurine b 1297 (Fig. 161), of rough gray clay, may represent the bust of a human being, though the profile with its muzzlelike nose suggests an animal. The eyes are simple depressions ringed by the clay that has been squeezed out. The shoulders are hardly marked. The base is squared off, keeping the object in an upright position.

b 1928

FIG. 162.—POTSHERD WITH HUMAN FIGURE IN RELIEF. SCALE, 1:2

IN RELIEF

There are a few human figures shown in relief ornamentation on vessels. An interesting example of this type of pottery sculpture is illustrated by No. b 1928 (Fig. 162). It is the neck of a jar with a thin light brown slip or wash over a light reddish brown ground. A conventionalized male figure supports itself with three-fingered hands on the vessel lip and seems to be looking over the rim.[1] The head is missing. The slender body is laterally compressed and may have served as a handle. The lower legs are modeled separately. A groove at the waistline may indicate a belt, and the ends of the sleeves also are marked by incisions.

Sherd b 767 (Fig. 163), with the typical yellowish brown and granular surface of Period II ware, shows a male figure dressed in fur or some costume with an irregular surface. A curved lengthwise groove indicates the opening of the dress. The arms are bare; the right one is raised and holds the end of an oblong object (a weapon?). The fragmentary profile shows a slightly opened mouth and a beard squared off at the end. The neck has a patch of red-brown wash. The markings on the sherd surface where the head was broken off suggest that the man had a long nose and a pointed headdress. In front of his head a fragment of a curved tail(?) is preserved. Perhaps the relief represented a man driving some animal with a whip or stick.

Sherd b 1465 (Fig. 163) shows a small fragment of relief ornament. It suggests two hands

[1] Hrozný in *Syria* VIII (1927) 7 and Plate III 4 illustrates a similar specimen from Kül Tepe.

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with three or four fingers holding an object (a vessel?) with three grooves. A part of a curved band is visible below. The exterior surface of the sherd is light brown, and the interior is gray.

b 767 b 1465

FIG. 163.—POTSHERDS WITH RELIEF ORNAMENTATION. ACTUAL SIZE

"SHOES"

We have seen above (pp. 128 f.) that the conoid "Hittite" headdress appears on the heads of all male figurines of Stratum II whenever a hat is represented. The "Hittite" shoe with upturned toe seems to be another characteristic part of the dress of Period II. There are several of these shoe figurines, made of typical Period II pottery and well fired.

No. b 2205 (Fig. 164), the best preserved specimen, is the only one illustrated. Its surface is smooth and light yellowish brown, with much powdered mica giving a somewhat golden luster which we know from pots and sherds. The leg portion is broken off, and it is doubtful how long it was. The missing toe end was easily reconstructed from other examples. The seam of the sole is marked by grooves along the sole edge above and below.

b 2205

FIG. 164.—SHOE FIGURINE. SCALE, 2:5

Other shoe figurines are of similar shape. The preserved part of No. b 1509 is solid pottery with gray paste of medium fineness. The surface is smooth, with some powdered mica. The sole and the sides are gray-brown; the top is gray. No. b 2045 has a smooth, almost polished exterior with a red-brown slip. The sole is somewhat convex. No. b 2063 has the more common yellowish brown surface of the Period II ware. Here the upturned toe is completely preserved. No. b 2244 is smooth and light grayish brown. A ridge on top of the shoe follows the long axis. The seam is indicated by grooves following the rim above and by traces of two lines at the lower toe end.

ZOÖMORPHIC FIGURINES

A large group of pottery sculptures are heads or foreparts of animals. The first series is composed of such heads as were either parts of figurines modeled entirely in the shape of animals or were parts of pottery vessels.

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No. b 1437 (frontispiece and Fig. 165) is an exceedingly well modeled oxhead. The surface is smooth or polished brown-red, in places dark gray and almost black. The broad neck shows well marked skin folds; from it rises the head, slightly curved back, forming a rounded angle between the horns. The ears are brought forward. The bulging eyes are each surrounded by a groove. The muzzle broadens toward the end, where the nostrils are marked by two round depressions and the mouth by a groove. The lower jaw is indicated by a crease curving toward the neck.

On a fragment of another oxhead a rope seems to extend from above the muzzle to the sides. It is crudely modeled in comparison with No. b 1437. Still another fragment may be an oxhead, but the specimen is too conventionalized to permit certain identification. The lost horns pointed upward. The base and the top of the long head are flat. The eyes are marked by angular protuberances and small depressions. The muzzle is a solid cylinder with squared-off end.

b 1437

Fig. 165.—Front View of Oxhead Figurine. Actual Size

b 2508

Fig. 166.—Front and Side Views of Buffalo-Head Figurine. Actual Size

The finely modeled buffalo head No. b 2508 (Fig. 166) is one of the few painted objects of Alişar II. A brown-red band extends on the light buff-brown surface at either side of the head from about the corner of the mouth to a point behind the imaginary ears and joins there another line running across the back of the neck. These bands seem to indicate ropes or similar devices. A cylindrical element with a deep hole in either end suggests a yoke bar. One more deep depression is in either side of the head below the "yoke." The eyes are marked by attached disks, with two curved grooves above each. Nostrils and mouth are marked by horizontal grooves. The under surface of the lower jaw is concave between well marked edges. Neither horns nor ears are indicated, but the general character of the head suggests that of a water buffalo. The head is narrower in general than the oxheads described above.

The living representative of the smooth gray Figurine b 2704 (Fig. 167) is called "Arab rabbit" by the natives. Only the anterior part of the exceedingly well executed animal figure is preserved. The animal is apparently pictured in the jumping position. The short forelegs lie

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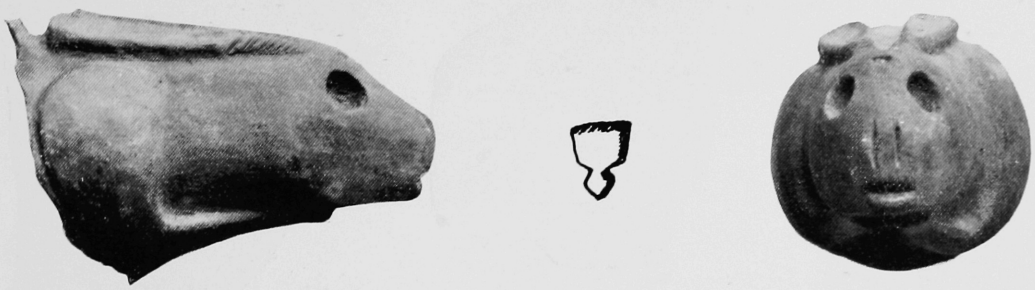
close to the body and neck and reach as far as the middle of the lower jaw, where they end in four toes each. The long ears, with some markings of hair at the base, lie close along the back. The head is squared off at the mouth; the lower jaw is exaggerated. The nose is marked by two vertical gashes, the mouth by a deep horizontal groove. The eyes are deep circular holes, originally perhaps inlaid. A depression on the forehead, though somewhat irregular, does not seem to be accidental.



b 2704

FIG. 167.—POTTERY FIGURINE OF A STEPPE RAT. SIDE AND FRONT VIEWS. SCALE, 1:2. DRAWING OF MARK ON FOREHEAD. SCALE, 2:1

b 2474 b 1800

FIG. 168.—POTTERY HEADS OF A DOE(?) AND OF AN UNIDENTIFIED ANIMAL. SCALE, 2:3

b 1528 b 2434

FIG. 169.—POTTERY FIGURINES OF BIRDS OF PREY. FRONT AND SIDE VIEWS. SCALE, 1:2

Head b 2474 (Fig. 168) may have been meant for a doe's head. Perhaps it was a handle of a bowl (cf. p. 139). The surface of the well fired specimen is light brown and has a wash with much powdered mica, resulting in the typical golden luster frequently noticed on Period II ware. The eyes (left one missing) are secondarily attached disks.

Head b 1800 (Fig. 168) is problematical. The ears or horns are broken. The muzzle is very broad, and the tongue extends somewhat from the irregularly modeled mouth. The bulging eyes are inclosed by rings. A broad ledge runs from the muzzle to a point between the ears.

Figurine b 2434 (Fig. 169) may represent the forepart of an eagle, though the characteristic

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curved beak of a predatory bird is less pronounced than in other specimens. The surface is light brown and smooth. The feathers on the partly spread wings are marked by parallel grooves, the fine feathers on the back of the neck by faint incisions. Other details are shown

b 2824 b 1613

FIG. 170.—POTTERY MOLDS b 2824 AND b 1613 AND A MODERN CAST OF NO. b 1613. SCALE, 2:3

in the illustration. The breast bone is indicated by a ridge, while the remains of two disproportionately small legs are visible at the lower end of the fracture. They seem to be conventionalized, like the legs of the ox on Bowl b 1466 (cf. Fig. 124), and it is possible that the present specimen is part of a similar vessel.

b 1249

FIG. 171.—FRONT VIEW OF BUFFALO HEAD. ACTUAL SIZE

Bird head No. b 1528 (Fig. 169) represents a predatory bird. The eyes are roughly oval protuberances surrounded by broad shallow grooves. There is a raised ring on top of the head.

It seems probable that many of these figurines were cast in carefully carved molds such as have been found; in this manner the products of the sculptor's art were popularized. When first found, the character of Mold b 1613 (Fig. 170) was not recognized; it appeared to be only an irregular concave piece of pottery with a light and dark gray surface. But an impression of the concave side showed the right half of the head and neck of an exceedingly well sculptured rabbit with naturalistically executed facial details. Even the fine hairs of the "mustache" are faithfully indicated. Mold b 2824 shows eight curved lines, perhaps representing part of a wing (cf. No. b 2434, Fig. 169).

There is a large group of vessel spouts in the form of animal heads. We have few indications of the way these spouts were actually attached to the vessels or of the general character of the vessels themselves; but Bowl b 1466, with the forepart of an ox, gives us a clue.

The best executed zoömorphic spout is buffalo head No. b 1249 (frontispiece and Fig. 171). It is decorated with simple brown lines over a light gray slip, which covers the light red-brown surface. There are five horizontal lines at either side of the head, and six lines extend across the muzzle down to the mouth. The preserved horn is decorated with ten short dashes. The

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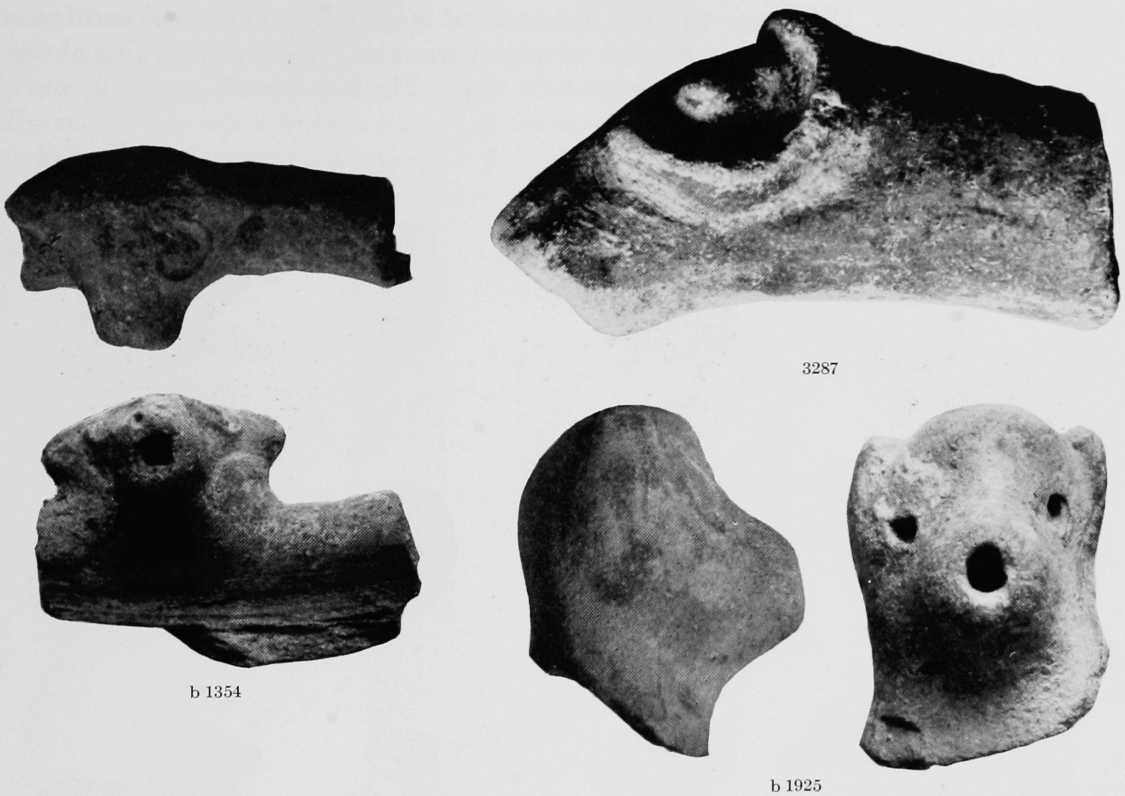

FIG. 172.—ANIMAL-HEAD SPOUTS. ACTUAL SIZE

FIG. 173.—POTTERY VESSEL HANDLES IN ANIMAL FORM. ACTUAL SIZE

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eye rims are painted with the same color, and between the eyes there is a faint triangle inclosing two parallel lines. The forepart of the slender head is laterally compressed and broadens toward the convex, almost circular, muzzle, which is perforated by a spout opening above the mouth. The semiglobular eyes are surrounded by rings. The horns curve gracefully outward and backward above the small ears (now broken).

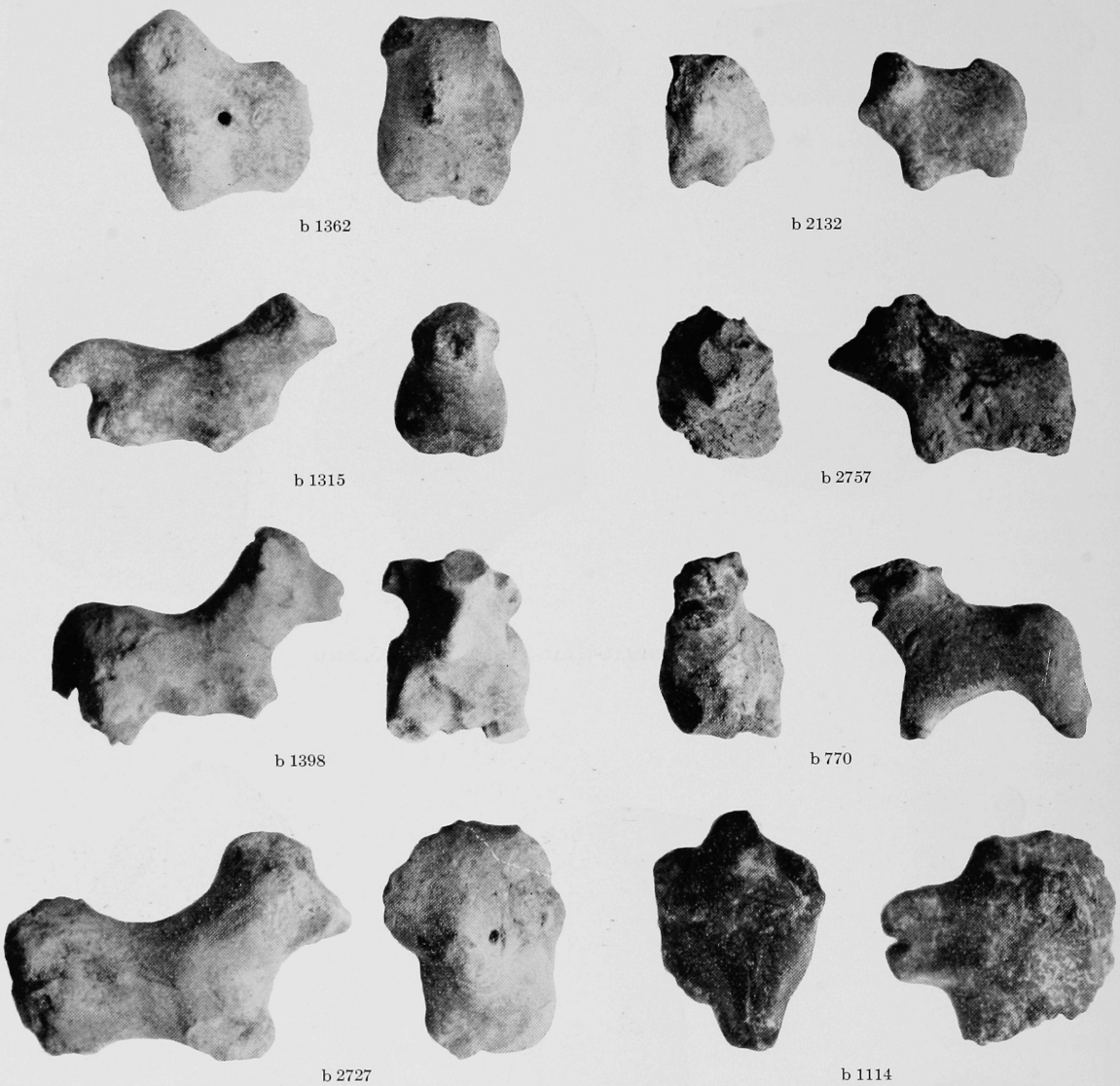

Fig. 174.—Sheep Figurines of Clay. Actual Size

Spout No. 3287 (Fig. 172) is coated with a red-brown wash or slip. It may represent the head of a different buffalo type, with horns set like those of a ram.

Oxhead Spout b 1354 (Fig. 172) is still attached to the rim of a bowl of unknown form. The surface of both the vessel fragment and the head is gray and granular. The head resembles that of No. b 1466 (cf. Fig. 124), but it is more crudely modeled. The spout channel is inside the bent-over vessel lip and ends at the mouth of the oxhead. The eyes (left one missing) are disks inclosed by rings.

Head b 1925 (Fig. 172) is light gray and granular and somewhat resembles a dog's head.

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The top is raised above the upright ears, the eyes are irregular circular depressions, and the muzzle is an elongated tube with spout opening.

The following animal handles were parts of bowls with ring bottoms and triangular handles (cf. type specimen, No. b 1682, Plate X). These zoömorphic forms may have been attached to the ordinary handles, or they may have taken their place. One or another of these specimens may have formed part of a zoömorphic bowl such as that in Color Plate III.

Handle 3090 (Fig. 173) may represent the head and neck of a duck, and the bowl may have been meant to be the body. The eyes are secondarily attached disks. The doe's head(?) in Figure 168 may have been a similar handle.

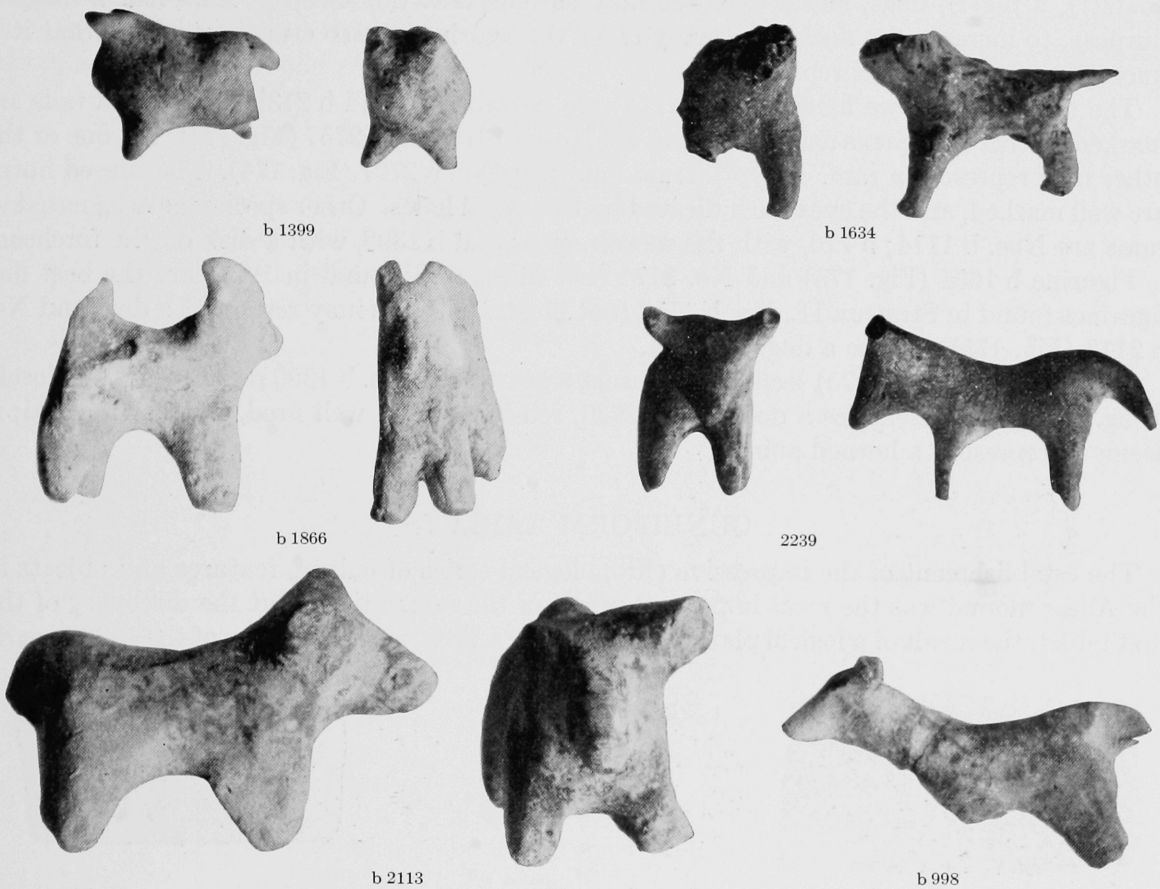

Fig. 175.—Miscellaneous Animal Figurines of Clay. Actual Size

Fragment b 2379 (not illustrated) shows remains of faint brown lines extending vertically on the yellowish brown "body" of the animal represented. There are traces of whitewash on the light brown surface of Fragment b 2378 (Fig. 173). No. b 1487 (Fig. 173) is reddish brown. These three are modeled in forms of problematical animal heads and necks; parts of the backs are present in Nos. b 2379 and b 2378. A knob at the back of No. b 2378 may represent the tail of the animal. While the ears of the other two animal heads are bent backward and downward close to the head, those of No. b 2378 are squared off behind. It is possible that they represent horns.

Another problematical animal head is illustrated by Handle b 1884 in Figure 173. The surface is light brown and granular. It seems to represent the head of a predatory quadruped. It is attached directly to the side of the vessel, in contrast to the handles just described, which

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are raised above the rims. The chest of the animal, squared off below, protrudes somewhat from the side of the vessel. The eyes are bulky knobs put on secondarily. In the open mouth the tongue is visible, lying on the rather pointed lower jaw.

Oxhead b 2602 (not illustrated) was the handle of a rather large vessel coated with a red-brown slip. The oxhead has a light brown ground color, and a red-brown patch is visible on the forehead. It is possible that Oxhead b 1437 (cf. frontispiece and Fig. 165) had a similar purpose. It resembles No. b 2602 closely, though it is more finely executed.

Of all the figurines, the series of small, crude, and slightly baked animal figures is the largest. The surfaces show shades of gray or brown. There are figures of sheep (both ewes and rams), goats(?), a pig(?), dogs, and a doe. We may assume that the sheep at least had a magical purpose, to increase the flocks. In many cases the figurines are so crudely modeled that it is uncertain what animal is represented.

The most typical ewe figurines (Fig. 174) are Nos. b 1362 and b 2132. The broad tails are marked. Other specimens defined as ewes are Nos. b 1315 and b 2757 (Fig. 174); but one or the other may represent a ram. A typical ram figurine is No. b 2727 (Fig. 174). The curved horns are well marked, and the eyes are indicated by two small holes. Other specimens designated as rams are Nos. b 1114; b 770, with the mouth open; and b 1398, with a disk on the forehead.

Figurine b 1634 (Fig. 175) and No. 3171 (not illustrated; found in 1927) are the best dog figurines found in Stratum II. No. b 1152 (not illustrated) also may represent a dog, and No. b 2113 (Fig. 175) may be a dog or a ram.

Figurine b 1866 (Fig. 175) seems to represent a goat, while No. b 1399 resembles most closely a pig. No. b 998 resembles a doe. No. b 2239, red-brown and well fired, is problematical; it seems to represent a horned animal.

CUNEIFORM TABLETS

The establishment of the impressive chronological series of culture features and objects in the Alişar mound was the most important result of the excavation. But the discovery of the first tablet, the result of a logical plan and systematic search, was the climax of the 1929 season.

Fig. 176.—Obverse, End, and Reverse of Cuneiform Tablet b 1600. Actual Size

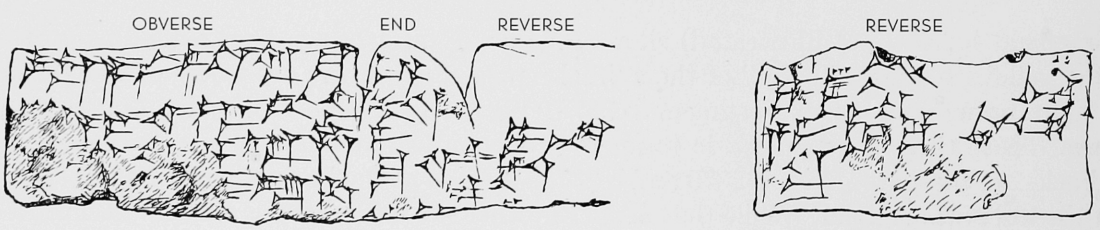

Fig. 177.—Facsimile of Cuneiform Tablet b 1600

The fragmentary Tablet b 1600 (Figs. 176 and 177[1]) occurred in Plot HH 9. It was found in the refuse dirt of the Period II upper level (Level 1); but, owing to the slope of the mound at this

[1] Facsimile drawn by Professor Poebel.

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spot, Level 2 remains were mixed with the Level 1 layer, and the fragment may belong to Level 2. The tablet is unbaked or only slightly fired, perhaps accidentally. Its surfaces are somewhat rough, grayish brown and light brown with one dark gray spot. The paste is grayish brown with rather fine grain.

Another unbaked tablet fragment (b 2700; Fig. 178), abraded and undecipherable, appeared 3 meters below the surface in Plot J 33. Its gray-brown surface is rather rough. The fine-grained paste, like that of No. b 1600, is grayish brown.

FIG. 178.—CUNEIFORM TABLET b 2700. ACTUAL SIZE

The Turkish government generously permitted us to take Tablet b 1600 to Chicago,[1] where Professors Edward Chiera and Arno Poebel of the Oriental Institute studied it with great care.[2] Their transliteration, translation, and comments follow.[3]

TRANSLITERATION

OBVERSE

[1]*DUB a-ni-ta ru-ba-e*
[2]*D[UB] a-si-wa DUB(?) bi-ru-nu(?)-wa*
[3][*DUB . . .*] . . [. .] . . [. .] . . *DUB ḫa-ni*
[4][*DUB . . . . . .*] . . *DUB ḫa-šu-wa-aš(?) i-na-ar*
[5][. . . . . .] . . [. .] . [. . .] . . . . . [. .]

Rest of obverse missing

REVERSE

Beginning missing

[1][. .] . [. . . . . .]
[2]*i ga-[t]i*
[3]*a-ni-ta*
[4]*ru-ba-e*

TRANSLATION

OBVERSE

[1]Seal of Anita the prince,
[2]s[eal] of Asiwa, seal(?) of Birunu(?)wa,
[3][seal . . .] . . . . . , seal of Ḫani,
[4][seal . . . . . .] . . , seal of Ḫašuwaš(?)
[5]. . . . . .

REVERSE

[1]. . . . . .
[2]in the hand of
[3]Anita
[4]the prince.

COMMENTS

The external appearance of the tablet differs from that of tablets found in Babylonia and Assyria, in that here the reverse, not the obverse, is flat; and the obverse, not the reverse, is convex.

The word *DUB*, "tablet," might have the meaning "document." In that case the tablet would begin with a list of documents grouped by the scribe for some uncertain purpose.

The tablet is fragmentary, and some of the signs are very indistinct. It is, therefore, impossible to determine with full certainty how the signs on the right end of the tablet and the signs on the reverse that are written in the same

[1] An excellent cast was made, which is now on exhibition in the Oriental Institute Museum at the University of Chicago. The original tablet has been returned to Ankara.

[2] Many more tablets have been found since the period covered by this report. The study of these later tablets will certainly amplify, and may modify, present conclusions.

[3] We wish to express our thanks to Professor Julius Lewy, of the University of Giessen, for his kindness in furnishing us with a preliminary study of this document.

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direction as those on the obverse should be connected with the various lines of the obverse. To connect the signs *i-na* or *i-na-ar* (end of line 4, obverse) with *ḫa-ni* (end of line 3) is not advisable because of the large blank space between *ḫa-ni* and *i-na*. Possibly, however, the sign *-wa* at the end of line 2 (obverse) belongs with *ḫa-ni* (line 3). In that case this name would be *ḫa-ni-wa*. There is, moreover, the possibility that *i-na-ar*, as a Semitic verbal form, continues and brings to an end the phrase *i ga-[t]í a-ni-ta ru-ba-e* on the reverse. But this is not very probable, because one would have to assume that the scribe, after writing the obverse, for some unknown reason wrote upon only the left half of the reverse, then turned the tablet around and continued to write upon the right (now, of course, the left) half of the reverse.

The genitive of the word for "prince" (line 4, reverse) is given as *ru-ba-e*, not as *ru-ba-im* as it would be in the so-called Cappadocian tablets. This indicates a later date than that of the Cappadocian tablets. This conclusion seems to be confirmed by the shape of the tablet and the style of the signs. This tablet was probably not written before 1800 B.C.[1]

SEALS

More seals were found in Stratum II than in all the other strata of the mound combined. The collection includes cylinder seals and stamp seals of stone, pottery, bone, and bronze (copper?). A pottery disk bearing the "Cappadocian symbol" (see p. 146), and likewise some clay stamps, have been tentatively added to this series. There are seal impressions on clay, on "handles," and on a vessel.

CYLINDER SEALS

All cylinder seals found in the Alişar mound were associated with Stratum II. The material is stone (serpentine and jasper)[2] and bone. The sealing patterns of the three specimens illustrated and described represent as many types of design: a simple row of four men, an intricate mazelike pattern, and a sacrificial(?) scene.

Cylinder Seal b 1000 (Fig. 179), found in Plot EE 20, .40 deep, is of black serpentine with polished surface. The cylinder is very slightly concave at the center of the length; the ends are flat. The design shows two pairs of men with birds' heads, each pair confronting each other. The heads with curved beaks are well marked, the arms (thin lines) are curved outward and downward, the bodies are contracted at the waistline. Heads, legs, and feet are in profile, shoulders in front view. Garments are problematical. The design is rather conventionalized. Short vertical dashes separate each figure from its neighbors, and a narrow groove encircles the base of the cylinder.

Cylinder Seal b 1630 (Fig. 179), found in Plot EE 19 in Level 1 refuse, is of rather frail grayish green serpentine with polished surface. The cylinder is unbored, with a flat base. Its curved top fades into a broken ring-handle with remains of a perforation about .004 in diameter. The design of fine irregular lines is intricate, but without coherence. Only the crudely represented form of a worshiper(?) with lifted arms may be distinguished. A thin incision encircles the top and base of the cylinder. The flat base shows a comparatively regular design of thin lines.

Cylinder Seal b 1968 (Fig. 179), found in Plot DD 19, 1.15 deep, is of light brown stone. The ends are flat and polished. The design shows perhaps a sacrificial scene. A running person, with hemispherical headdress(?) and girdled coat extending to the knees, holds a goat by the chin. Another small animal, perhaps also a goat, is above the back of the larger one. Then follows an "hour glass" design (or a bag tied together in the middle?), above it a semi-

[1] It is tempting to identify this Prince Anita with King Anittash of Kushshar, who captured Ḫattushash early in the second millennium and made it his capital. This would link the Alişar site with the important capital city of Kushshar. However, this cannot at present be suggested as more than an obvious possibility. For an account of King Anittash of Kushshar, see Hrozný, "L'invasion des Indo-Européens en Asie Mineure vers 2000 av. J.-C.," *Archiv or.* I (1929) 273 ff.

[2] Cf. *OIP* VII 43–44.

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circular object with serrated base and filled with an oblique cross. This is separated from the "hour glass" by a horizontal line. The next main element may be a horned altar with tripod. On either side of the altar(?) and of the "hour glass," and between the hind legs of the large goat, oval elements (representing grain?) are distributed.

FIG. 179.—CYLINDER SEALS AND MODERN IMPRESSIONS. ACTUAL SIZE

STAMP SEALS

STONE

The series of stone stamp seals from Stratum II ranges from simple sealing patterns (Figs. 180–181) to highly elaborate specimens (Fig. 182). While a seal like No. b 2427 (Fig. 180), found in the bottom refuse of Stratum II, may possibly belong to Stratum I, the seals with elaborate patterns are doubtless of Period II origin.

Stamp Seal b 1699 (Fig. 180), found in Plot HH 9 in Level 1 refuse, is of gray-brown serpentine. Its surface, originally polished, is now mostly corroded. The base fades into a handle with a perforation near the top. The design shows a cross-shaped incision; the four divisions of the oval are filled with small circular depressions.

Stamp Seal b 2427 (Fig. 180), found in Plots DD–EE 10 in a low layer, is of gray (in part gray-green) serpentine, with smooth surface partly polished. The handle has a roughly rectangular cross-section which is flattened toward the top. The design shows a deep cross-shaped incision; the four divisions are filled with straight lines. This seal may belong to Period I.

Stamp Seal b 1462 (Fig. 180), found in Plot GG 11 less than .50 deep, is of black serpentine, well worked, with polished surface. It has a convexly conoid knob handle, apparently without perforation. The design is a flower pattern with eight petals radiating from a central depression. In view of the find-spot this may be later than Period II.

Stamp Seal b 2240 (Fig. 180), found in Plot HH 9 in refuse of the lower occupational level, is of granular stone in which there is much fine mica; it is gray-brown, with the base gray. The surface is granular. It has a loop handle with cross-section .01×.013. The design shows a crude face. The serrated groove at the top may represent hair; eyebrows and nose are

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indicated by narrower lines; the eyes are surrounded by fine grooves. The "cheeks" have fine incisions, and the mouth(?) is only a faint line.

Stamp Seal b 2559 (Fig. 180), found in Plot J 33 between 1.50 and 1.80 deep, is of gray serpentine, with smooth surface. The handle (broken) has a circular cross-section. The design shows a flower(?), five circular depressions around a plain center.

Stamp Seal b 2439 (Fig. 180), found in Plot GG 9 in the refuse of Level 1, is of burned limestone(?) of fine grain, light gray, with smooth surface partly polished. The round top of the handle (broken) has a perforation .003 in diameter. The design shows a band of three parallel lines with six loops around a "sun" symbol with a depression in the center. No. b 1446 (cf. Fig. 188) shows an impression of a similar seal.

b 1699 b 2427 b 1462 b 2240 b 2559 b 2439

Fig. 180.—Stone Stamp Seals. Actual Size

Stamp Seal b 1651 (Fig. 181), found in Plot HH 9 in Section 22 of Level 1, is of gray-green serpentine, with smooth surface. The turtle's head has a squared-off neck .027 in diameter. Folds on top of the head are indicated by deep and shallow incisions; the eyes are deep oval depressions, perhaps originally inlaid; the mouth is a rather faint depression in front. A deep line extends on either side from the back of the head to the chin, and there is a lengthwise depression on the lower side of the jaw. On either side of the face is a crudely incised water(?) bird (heron?) with long beak and neck; one leg of each is indicated, that of one bird ending in a claw marked by three lines. The wing of the bird on the right side of the turtle's head is large, with feathers indicated by parallel incisions; faint incisions suggest the wing of the bird on the left side. The sealing design shows some curved lines, scratched rather than incised, within an irregular circle on the squared-off neck; there are additional scratchings all over the design. One spot is slightly depressed.

Among the elaborate patterns on some of the stone stamp seals of Stratum II are designs which are still in use in the Western world. Some of these are illustrated.

Stamp Seal b 1478 (Fig. 182), found in Plot FF 11, .60 deep, is of burned limestone of fine grain, gray-brown, with smooth surface. The handle, encircled by narrow incisions, shows that it was broken during the process of perforation and the bore left unfinished. The design

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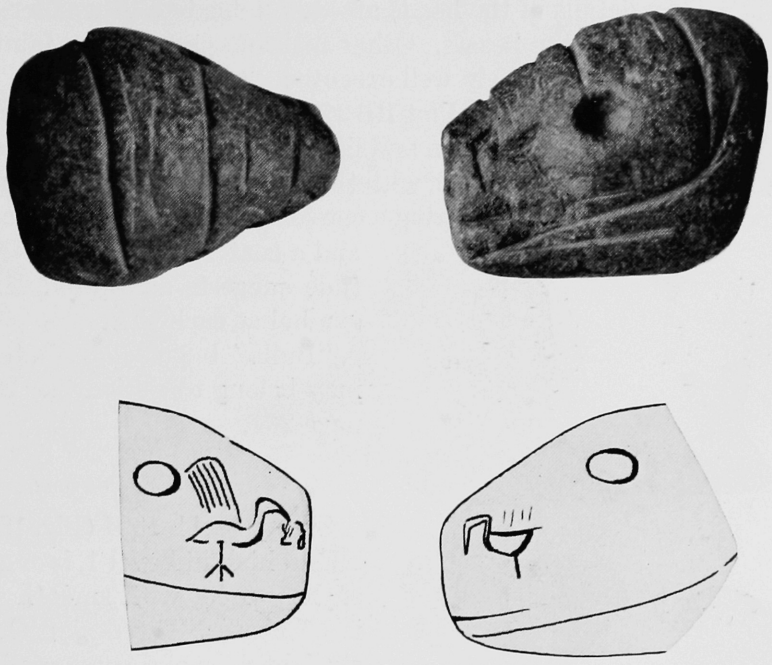
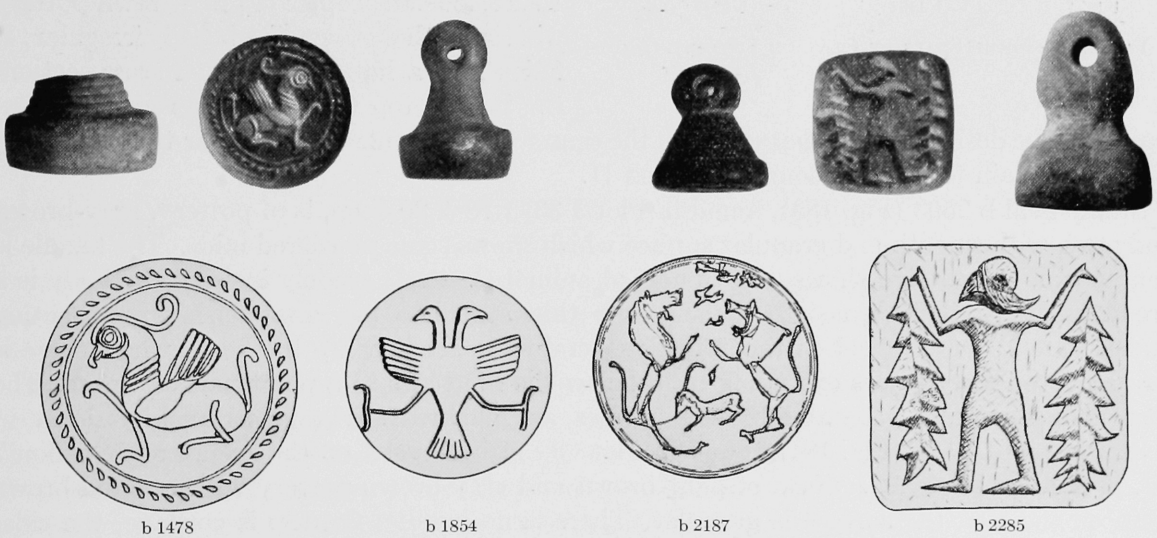
shows a winged quadruped (a lion?), with the head of a bird of prey, in an attitude of attack. The eye is a ring with a central knob, the long head feather and the wing feathers are outlined, and some body muscles are pronounced. It is very well executed.



b 1651

FIG. 181.—STONE STAMP SEAL(?) IN THE FORM OF A TURTLE'S HEAD. ACTUAL SIZE. DRAWINGS OF WATER(?) BIRDS ON THE HEAD



b 1478 b 1854 b 2187 b 2285

FIG. 182.—ELABORATE STAMP SEALS OF STONE. ACTUAL SIZE. DRAWINGS OF IMPRESSIONS. SCALE, 2:1

Stamp Seal b 1854 (Fig. 182), found in Plot HH 8 high in Level 1 (1.30 deep), is of light gray alabaster(?) with smooth surface. Its handle is slightly flattened at the perforation. The design shows a double-headed eagle; the undulating lines at the ends of the legs are too large to be claws and are probably snakes or similar reptiles. Faint incisions mark the feathers of wings and tail. It is well executed.

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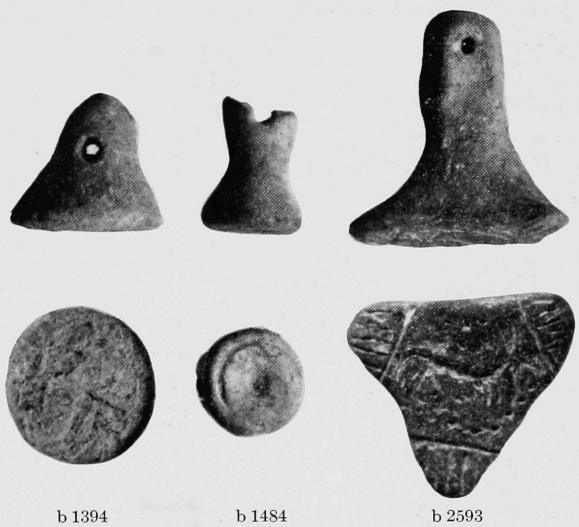
Stamp Seal b 2187 (Fig. 182), found in Plot HH 11 in the refuse between Levels 1 and 2, is of black serpentine with polished surface. The design shows two beasts of prey in fighting posture. The larger one is certainly a lion; the smaller also, with a broader and more angular mane, may be a lion. The details of the heads are well indicated. A smaller animal (a goat?) crouches between the bodies of the beasts. Other incisions, some very faint, cannot be deciphered, though the design is extremely well executed.

Stamp Seal b 2285 (Fig. 182), found in Plot BB 19, .30–.80 deep, is of burned limestone with a fine grain resembling pottery, gray-brown and light brown, with smooth surface. Its handle has a circular base; the wide top is flattened, with the perforation through the narrow axis. The design shows a man with a bird's head wearing a convexly conoid headdress, a "Hittite braid," and a coat(?) ending at the thighs. His attitude suggests adoration. There is a tree(?) symbol at each side.

"Bulla" b 2225, attributed to Period IV, may belong to Period II. It is described on page 261.



b 1394 b 1484 b 2593

Fig. 183.—Stamp Seals of Clay or Pottery. Actual Size

Pottery

Stamp Seal b 1394 (Fig. 183), found in Plot EE 19 high in Level 1, is of gray pottery very slightly fired, with smooth surface. The top is off center. The design shows curved and straight lines and some curved eye elements, but there seems to be no definite pattern.

Stamp Seal b 1484 (Fig. 183), found in Plot FF 11, .20–.80 deep, is of gray-brown pottery with smooth surface. Its base is irregular; it fades into a handle with oval cross-section; the broken top was probably round and expanded. The design shows a depression in the center and a circular groove near the periphery. It is not certain that this belongs to Period II.

Stamp Seal b 2593 (Fig. 183), found in Plot J 33, 1.70–2.20 deep, is of pottery, gray-brown and gray, with smooth and granular surface which shows some powdered mica. The handle is pentagonal. The design shows a male horned animal (a stag?) crudely incised; the body is a broad groove; tail, legs, nose, and horns are thin incisions. Six short dashes representing birds(?) are above the back of the animal; several more are beneath the body, where there is also a curved row of dots extending from below the hind legs to a point near the nose. The corners of the design, separated by incised lines, are filled with irregular parallel incisions.

Stamp Seal b 1529 (Fig. 184), found in Plot GG 11 in Level 1 on the fireplace of Section 7 (cf. p. 90), is a disk .024 thick, of light brown and gray-brown pottery with one red-brown stain on the top; the surface is granular. There is no handle; the top is concave, the sides straight, and the bottom slightly convex. Its elaborate pattern is called the "marque royale" by De Genouillac in his discussion of examples found at Boğaz Köy.[1] An identical symbol was used at Kül Tepe.[2] We prefer to call the design the "Cappadocian symbol."[3] We believe that

[1] *Céramique cappadocienne* (Paris, 1926) I 33.

[2] A specimen from Kül Tepe, shown us by the villagers of Kara Hüyük, is illustrated in *OIC* No. 8, Fig. 14.

[3] [A fragment of a similar symbol was found at Boğaz Köy by Dr. Kurt Bittel, who calls the design a "Blitzsymbol." See *MDOG* No. 70 (1932) Abb. 11.—Editor.]

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this disk was used as a stamp seal, for an impression of exactly this design was found on Sherd b 2175, illustrated in Figure 184 and described on page 150.

Certain pottery objects resemble stamp seals, but they are rather frail and probably had a use different from that of the seals previously described. They may have been used to stamp fabrics. Possibly they were used for body decoration, though we have no evidence of this practice.

No. b 2366 (Fig. 184), found in Plot HH 9 in Level 2, Complex I, is of light gray-brown pottery (the raised rings of the design are brown) with rather smooth, irregular surface, now cracked. The handle is squared off and circular at the end. The design shows five raised con-

Fig. 184.—Pottery Stamp Seal and Ancient Impression of the "Cappadocian Symbol," with Other Stamp Seals of Pottery or Clay. Scale, 1:2

centric rings separated by deep grooves. The central ring incloses an area only slightly concave; the second and third rings protrude most; the fifth ring (the rim) is serrated and raised very little.

Stamp b 2428 (Fig. 184), found low in Plots DD–EE 10, is of slightly fired pottery, mostly light brown on the top and mostly dark gray on the bottom, with granular, irregular surface. The handle is squared off and circular at the end. The design shows three concentric rings, serrated, separated by shallow grooves. The outer ring (the rim) is raised least.

Stamp b 1958 (not illustrated), found in Plot DD 19, .90–1.20 deep, high in Level 1, is of very slightly fired gray-brown pottery, with rough, irregular, light gray-brown surface. The paste shows dark gray stratification in thin layers. Its handle, now broken, was apparently a knob; the base has a squared-off edge. The design shows a depressed rosette in the center surrounded by three concentric rings, perhaps originally serrated.

Stamp b 2754 (Fig. 184), found in Plot J 33 between Levels 1 and 2, is of very slightly fired gray pottery with light brown stains; the surface is irregular and granular in spots. Its broken handle had a squared-off top; its base is flat. The design has entirely disappeared.

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Bone

Only a few specimens of bone seals have been found. Stamp Seal b 1232 (Fig. 185), found in refuse in Plot DD 20, is of light yellow-brown bone with polished surface. Handle and base were made separately and joined. The handle is nearly circular at the foot and hexagonal at the squared-off top; it is decorated with a spiral incision extending from the foot to the perforation. The design shows four circles with wings and centered dots, connected in swastika fashion. On the top of the square base are incised four circles with centered dots.

b 1232 b 2102 b 1045

Fig. 185.—Stamp Seals of Bone. Actual Size

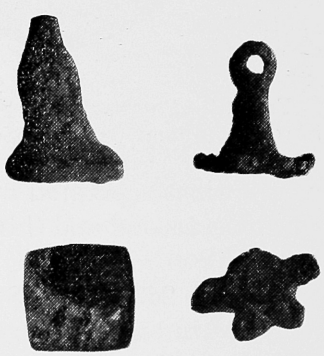
Stamp Seal b 2102 (Fig. 185), found in Plot GG 11 in Level 2, is of light brown bone, now rather corroded, with surface smooth where it is not porous. The perforations in the base seem to have been an afterthought. The design shows a crude face; hair, eyebrows, and nose are indicated as on Seal b 2240 (cf. Fig. 180). The left eye is indicated by a small knob; part of the mouth can be discerned; the chin is marked by a horizontal ledge; a knob on either side may represent the cheeks. Some features seem to have been destroyed by the perforations.

Stamp Seal b 1045 (Fig. 185), found in a high layer of refuse in Plot S 23, 1.20–1.40 deep, is of brittle bone, gray-white, with a light gray-brown film; the surface is slightly granular. The handle has a rectangular cross-section (.006×.0075), a round top, and a perforation (.0035) halfway between foot and top. About half the base has been broken off. The design shows the upper half of a face like that on No. b 2102 described above.

a 430

Fig. 186.—Stamp Seal(?) in the Form of an Ivory Shoe, Probably of Period II Workmanship. Actual Size

No. a 430 (Fig. 186), of ivory, was found in Stratum III, but form and workmanship suggest that it is of Period II origin. It may have been either a stamp seal or an amulet. The shoe, with upturned toe end and lateral perforation, is covered with incised ornaments, angles, and curved lines. There is a "sun" symbol on the top. The possible seal design on the sole is abraded, but lines of dashes and two series of three wedges each can be recognized.



b 1921 b 2423

Fig. 187.—Stamp Seals of Copper or Bronze. Actual Size

Metal

The two metal seals so far found in Stratum II may be intrusive.

Stamp Seal b 1921 (Fig. 187), found in Plot DD 19, .50–.90 deep, is of bronze or copper, oxidized blue-green; its surface is rough, but smoother where it has been cleaned. The flattened handle (similar to that of Seal b 898 of Stratum I) is perforated through its expanded center. The design, partly lost, shows eight parallel lines crossed by others at right angles.

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Stamp Seal b 2423 (Fig. 187), found in Plot GG 9 between Level 1 and Level 2, is of bronze or copper, heavily oxidized blue-green, with a rough surface. Its handle (oval in cross-section), narrowing toward the top, ends in an expanded oval which is perforated. The stamping base was a rosette of six leaves, of which two have been broken away. The design shows two concentric circles in the center with six loops radiating from the outer one.

IMPRESSIONS

No. b 1446 (Fig. 188), found in Plot FF 10 high in Level 1, is of gray clay showing some evidence of firing; its surface is rough. The curved fragment (part of a merchandise tag?) shows one complete impression, two fragmentary impressions of the same stamp seal, and some faint finger prints. The stamp seal design, resembling that of Seal b 2439 (cf. Fig. 180), shows a series of nine interlocking S figures encircling a central "sun" symbol and surrounded by a ring of oblique dashes.

Fig. 188.—Ancient Impressions of Stamp Seals on Clay. Actual Size

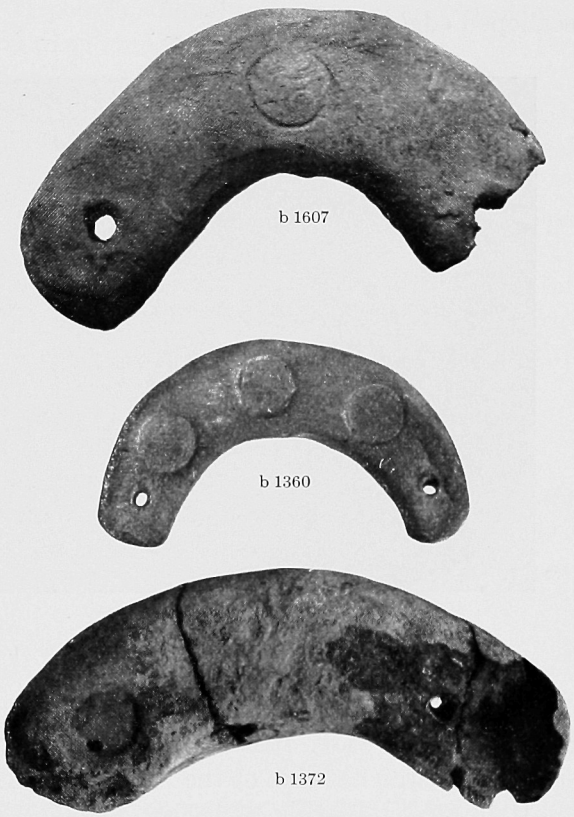

Fig. 189.—Impressions of Stamp Seals on "Handles." Scale, 3:5

No. b 1622 (Fig. 188), found in Plot FF 11 in Level 1 refuse, is .021 thick, of gray clay showing some evidence of firing; its surface is rough and irregular. Its somewhat concave base has a lengthwise depression, perhaps left by the object to which the clay was attached as a tag(?). The stamp seal design shows a twist of two series of three lines each, encircling a horned(?) animal.

No. b 2503 (Fig. 188), found in Plot DD 19 in Level 2, is of gray unfired(?) clay with a rough surface. The stamp seal design shows a square field quartered, opposite quarters alike; two are filled with crosses, the other two with parallel lines. The design is analogous to that of

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Seal b 853 of Stratum I (cf. Fig. 64); and this impression was found in the bottom refuse of Stratum II, where an intermixture of Stratum I remains was marked.

No. b 2220 (Fig. 188), found in Plot CC 19 in Level 1, .55–1.30 deep, is .0145 thick, of gray clay showing traces of firing, with a rough and irregular surface. It is curved and may be part of a tablet envelope. The fragment of a cylinder seal impression about .018 wide shows a person in Mesopotamian(?) dress, but other parts of the design cannot be distinguished.

Stamp seal impressions on some of the puzzling "handles" suggest that these objects were used in connection with merchandise.

"Handle" b 1372 (Fig. 189), found in Plot EE 19, .15–.55 deep, is .027 thick with a perforation .004 wide. It is of very slightly fired gray pottery. The faint stamp design shows the scalloped edge of a rosette.

b 1140

FIG. 190.—IMPRESSION OF A STAMP SEAL ON A SHERD OF A LARGE JAR. ACTUAL SIZE

"Handle" b 1360 (Fig. 189), found in Plot EE 19, .30 deep, is .0115 thick with two perforations each .003 wide. It is of gray-brown pottery with a granular surface. The seal impressions are on the flat side of the "handle." The design shows a rosette with five leaves.

"Handle" b 1607 (Fig. 189), found in Plot FF 11 in Level 1, Section 7, is .023 thick, of light brown pottery with granular surface. The impression is on the flat side. The very faint design may show a bird.

Sherd b 1140 (Fig. 190), found in Plot EE 20, Level 2, on the floor of Section 9, is .017 thick, of light brown pottery with granular surface. It is a fragment of a large jar; the seal impression is below the end of the handle. Seals large enough to make such an impression are almost unknown.[1] The design shows a winged quadruped with legs ending in claws; it has a coiled tail. A faint trace of the wing is preserved. The body is well executed. Below the belly sits a bird.

Sherd b 2175 (cf. Fig. 184), found in Plots DD–EE 10 between Levels 1 and 2, is .04 thick, of bright red pottery with gray paste; the pattern is gray-brown (except for the rim, which is the color of the pottery); the surface is granular. The design shows the "Cappadocian symbol" raised slightly above the surface. Another potsherd was decorated with a portion of this same design, while a third showed a similar design but without the small disks.

[1] But cf. No. b 1529 in Fig. 184.

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METAL OBJECTS

There are types of metal objects in Stratum II which do not differ from those of Alişar I or Alişar III; but some elaborations of these types occur in Stratum II only, among them pins with double-bird heads or with glazed frit heads. There are also a number of new types.

Perhaps analyses of Alişar II metal objects will show that many specimens now designated "copper or bronze" are actually bronze.

The series of Alişar II copper or bronze objects includes the following types: spindle-shaped points, a spatulate object, socketed points (new), a barbed arrowhead (new), lance heads, knife or dagger blades, socketed celts (new), sickles (new), needles (new), bracelets, rings, pins, and miscellaneous objects.

We ascribe the first use of lead to the Alişar II people, though one small lead object was found in Stratum I (cf. p. 61). The lead rings found in considerable numbers appear for the first time in Stratum II and persist at least as late as Period IV. Some occur even in Stratum V. If silver and gold rings were used for money, the lead rings may have been used as small change (cf. p. 80). Some of these seemingly lead rings may actually be silver, but only a chemical analysis can determine that.

Gold was probably known, but objects of this metal are scarce everywhere at Alişar. One bronze or copper tack with a gold head was found in Stratum II.

Two iron fragments (b 1926 and b 2292) found among Alişar II remains in Plot DD 19 (at .50–.90 depth) and in Plot CC 19 (in Level 1 of Stratum II) we consider as accidental intrusives. There is hardly a doubt that iron was unknown in Asia Minor prior to the Hittite Empire period (Alişar IV).

COPPER OR BRONZE

Spindle-shaped points of copper or bronze are most numerous in Stratum II. Like those of Stratum I (cf. pp. 57–58), they may have had various purposes, as indicated by the variety of dimensions and difference in points. All these objects seem to have been inserted in a handle or shaft of perishable material. The handle ends are squared off, round, flattened, or pointed. In most cases the opposite ends are pointed, though spatulate ends also are frequent. Most of the points shown (Fig. 191) have square cross-sections ranging from .0025 to .007 on a side. A few points have rectangular cross-sections: No. b 2797 is .002×.0035; No. b 1031 is .004×.0045; No. b 1356 is .004×.0045; No. b 2491 is .0055×.0065. Point b 1190 is round; its diameter is .0035.

No. b 1387 (Fig. 192) is an interesting and well wrought specimen. It has a round tapering handle with flaring spatulate end attached. The spatula is .001 thick.

The socketed points shown in Figure 192 illustrate a type of object introduced in Period II. They may have had various purposes. No. b 165 is a rolled tube with pointed end. No. b 1628 has a flattened and rolled upper end, shaped to fit a shaft with rectangular cross-section (.007×.008). No. b 1495 (not illustrated), twice as long as No. b 1628, has a similar shape. Its rectangular part measures .004×.006. There is one rivet hole.

The barbs of Arrowhead b 2151 (Fig. 192) are pointed. The square tang is continued in a ridge on each side extending to the tip.

Point b 2042 (Fig. 192) may be either a lance head or a small dagger. The elongated shaft end, contrasting with the round handle end (where preserved) of the latter series, suggests its use as a lance blade. Two rivets are in position. The blade is double-edged with diamond-shaped cross-section .0025 thick.

The well wrought lance(?) head No. b 1228 (Fig. 193) consists of a double-edged spatulate

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FIG. 191.—SPINDLE-SHAPED POINTS OF COPPER OR BRONZE. SCALE, 2:3

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blade with diamond-shaped cross-section (.0025 thick) and a long shaft with rectangular cross-section (.0025×.0075).

The double-edged lanceolate blade No. b 1361 (Fig. 194) has a diamond-shaped cross-section .006 thick. The point is obtuse. There are three perforations for rivets at the expanded handle end.

Fig. 192.—A Spatula, Socketed Points, an Arrowhead, and a Lance(?) Head of Copper or Bronze. Actual Size

The shape of Blade b 1314 (Fig. 193) is similar to that of No. b 1361, but it is longer and has only two holes for handle pins. The thickness is .005.

Four fragments suggest that the double-edged blades closely resembled in shape Blades b 1361 and b 1314. At the handle end of No. b 1536 (Fig. 193) two perforations are preserved. No. b 2496 (Fig. 194) is only slightly smaller and thinner than No. b 1361. The point of this blade is accidentally curved. No. b 2072 (Fig. 194) is only .0025 thick. Fragment b 2091 (Fig. 194) has four perforations for rivets; one rivet is preserved. Blade b 3, found in Stratum III, is probably of Stratum II origin (cf. p. 208).

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Three other fragments (Fig. 194) give hardly a clue to the original shapes of the blades. No. b 1410 (.003 thick) has a blunt point. No. b 2651 is a mid-blade fragment .003 thick. No. b 1322 is a small double-edged knife fragment with diamond-shaped cross-section .0013 thick.

So far the metal celt with socket (Fig. 195) has been found in Stratum II and Stratum IV only. The long socket of No. b 2062 has two perforations for the retaining rivets. The blade is spatulate and flaring. No. b 2118 also has two perforations. No. b 2766 still contains in its socket a fragment of the wood of the shaft, which was fastened by a rivet still in position. No. b 2152, the smallest specimen, also has the rivet in position.

Fig. 193.—Dagger or Knife Blades and a Lance(?) Head of Copper or Bronze. Scale, 1:2

The sickle is another important tool introduced in Period II. It is a curious fact that we have found this particular sickle, more adapted for tearing out the stalks than for cutting them off, in Stratum II only, although the "tearing sickle" is still being used by the modern Anatolians.[1] Sickle b 1444 (Fig. 196) is an example of this implement. The serrated edge is even more pronounced in Sickle b 1535 (not illustrated). The thickness of these objects is .0025–.003.

The needle first appeared in Period II. During 1929 alone 129 needles were found in Stratum II.[2] A few type specimens illustrate the whole series (Fig. 197). In addition to the ordinary needles, ranging from .065 to .137 in length (complete specimens), some extraordinarily long needles were used by the Alişar II people. No. b 1253 (not illustrated), for instance, is .281 long.

[1] According to Professor Julius von Mészáros, of the Ethnographical Museum, Ankara.

[2] Needle b 43, which occurred in Level 7 (Stratum I) in Plots L 14–15, is undoubtedly an intrusive piece from Alişar II.

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The bracelets uncovered in Stratum II (Fig. 198) are plain rings with overlapping ends. No. b 1499 has an oval cross-section .0035×.0055. The ends taper to rounded points. No. b 1075 seems to have at least one end squared off. No. b 1270 has an oval cross-section .002×.004.

The small rings illustrated in Figure 199 were probably employed for various purposes such as ear pendants or finger rings. It may be that some were used as small change in the same manner as the lead rings. Most of the illustrations are self-explanatory, but some features

Fig. 194.—Blades and Blade Fragments of Copper or Bronze. Scale, 2:3

may be added. The two rings grouped as No. b 1433 were found with Skeleton b X18 in Plot DD 20; the two rings of No. b 1429 accompanied Skeleton b X23 in Plot FF 10. Both pairs may have been ear pendants. No. b 2648 occurred with Skeleton b X31 in Plot FF 10. The fragments of two rings (b 2822) may have been ear pendants of Skeleton b X41 in Plot FF 10. Ring b 2229 has a square cross-section. No. b 2399 is made of a rectangular band coiled three times, with one end bent over to form a hook.

Pins are classified by the shapes of their heads, as in Period I. We distinguished the following Alişar II types: globular, hexagonal-globular, elliptical, semiglobular, conical, biconical, pyramidal, polyhedral, eardrop-shaped, two-lobed, cylindrical, concavely discoid, scalloped dis-

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FIG. 195.—SOCKETED CELTS OF COPPER OR BRONZE. SCALE, 2:3

FIG. 196.—A SICKLE OF COPPER OR BRONZE. SCALE, 2:3

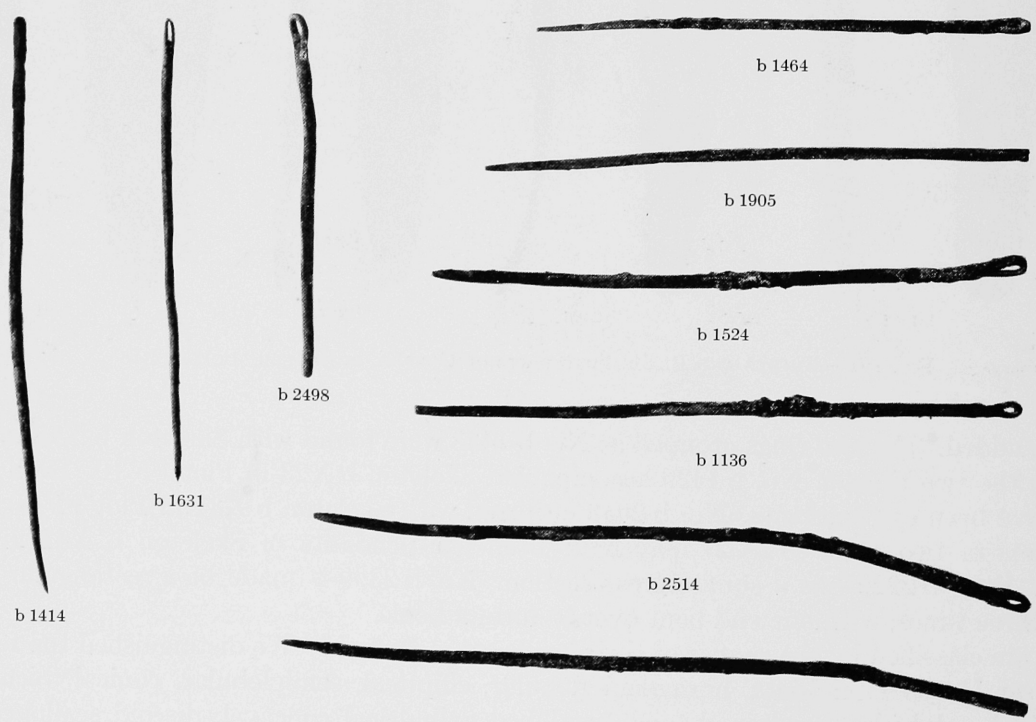

FIG. 197.—NEEDLES OF COPPER OR BRONZE. ACTUAL SIZE

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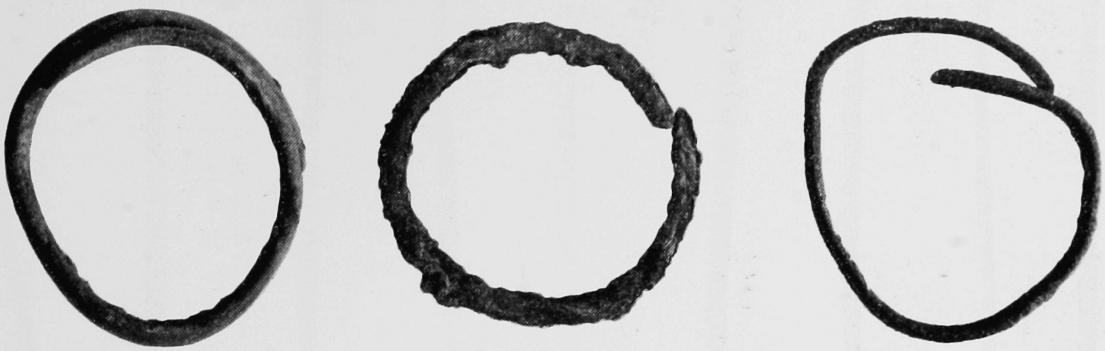
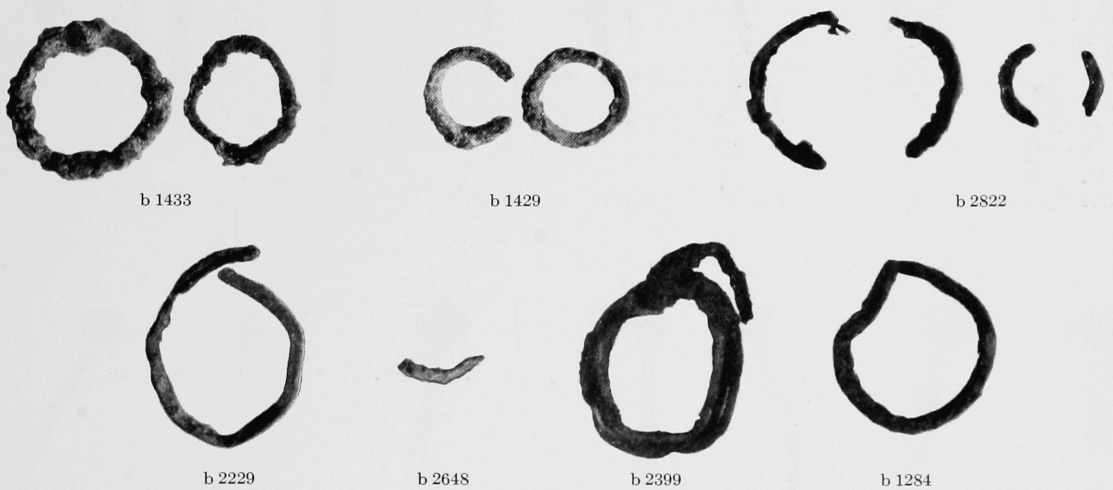
coid, fluted discoid, star-shaped, plano-convex, coiled, lanceolate, double-bird headed, and animal-headed(?). There are also pins with heads of glazed frit.



b 1499 b 1075 b 1270

FIG. 198.—BRACELETS OF COPPER OR BRONZE. ACTUAL SIZE



b 1433 b 1429 b 2822

b 2229 b 2648 b 2399 b 1284

b 2059 b 2159 b 1407 b 2649 b 1165

FIG. 199.—RINGS OF COPPER OR BRONZE. ACTUAL SIZE

All Period I pin-head forms are represented,[1] besides many others. This fact cautions us in using pins as chronological criteria. Only the most elaborate specimens, such as those with double-bird head, may be considered typical for Alişar II.

Pins with globular heads are illustrated by Nos. b 2716, b 1943, and b 1141 (Fig. 200).[2] No. b 1943 is ornamented with incised lines below the head. The head of No. b 1141 is neatly

[1] Except "pear-shaped," almost identical with Alişar II eardrop-shaped.

[2] The measurements of specimens are omitted where the illustrations are given according to scale.

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b 2716 b 1943 b 1141 b 1127 b 1269 b 1259 b 2694 b 1286 b 2799

b 1291 b 1417 b 2587 b 1625 b 1542 b 1617 b 1389

Fig. 200.—Pins of Copper or Bronze. Actual Size

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fluted; the shaft is ornamented by fifteen incised lines below the head and three incised triangles below the last line. There is also a pin (b 2269, not illustrated) perforated by a vertical slit .02 below the head. The head of the plain pin No. b 1127 (Fig. 200) is more hexagonal than globular; it is the only one of this type.

Three pins with elliptical heads are shown in Figure 200. No. b 1269 is plain. No. b 1259, with expanding mid-point, has an incised spiral on the shaft below the head. No. b 2694 is ornamented by a series of incised lines below the head.

Pins b 1286, b 2799, and b 1291 (Fig. 200) have semiglobular heads. Pin b 1286 expands at the mid-point and is ornamented with grooves encircling the head end of the shaft; its head is ornamented with eight flutes. The other two pins are plain. The view from the top shows the head of Pin b 1291 as slightly elliptical (.01×.007).

The type series of pins with conical heads (Fig. 200) includes Nos. b 1417, plain; b 2587, with four incised lines below the head; and b 1625 with eight(?) such lines.

Three pins with biconical heads are illustrated in Figure 200. Nos. b 1542 and b 1389 are plain. No. b 1617 is ornamented with a series of eight(?) grooves encircling the upper part of the shaft.

Pyramidal head forms (Fig. 201), less frequent than in Stratum I, are illustrated by the plain pins Nos. b 1144 and b 1179.

Of some types of pins there are single specimens only. Such are Nos. b 1420, b 1173, b 2431, and b 1442 in Figure 201. The head of Pin b 1420 is polyhedral. Pin b 1173, with eardrop-shaped head, is ornamented with fourteen lines encircling the upper shaft. Pin b 2431, with two-lobed head, is plain. The head of Pin b 1442 is a horizontal cylinder.

There are three groups of pins with discoid heads: concavely discoid, scalloped discoid, and fluted discoid. Specimens with concavely discoid heads (Fig. 201) are Nos. b 2256 and b 2391 (plain) and b 1174 (scalloped). No. b 1879 (not illustrated), with vertical slit .03 below the head, also belongs to this series. Two pins with similar slits were found in Stratum I (cf. p. 61).

In the scalloped discoid group (Fig. 201) No. b 2655 is an exceptionally large pin, a mortuary gift of Skeleton b X45 in Plot DD 10. Its head, as in the other specimens in this group, has vertical grooves at the side. The color of this pin is purplish, in contrast to the bluish green oxide color of the other bronze or copper specimens. The disk heads of Nos. b 2176, b 1819, and b 2798 have recessed centers at top and bottom. No. b 1174 is slightly concave on top. In addition to the head ornament, there is a herringbone pattern below the head of Pin b 2176. No. b 1819 is ornamented by two horizontal grooves. No. b 2798 has grooves and oblique strokes at the head end of the shaft.

There are two pins with fluted discoid heads (Fig. 202). The head of No. b 1851 has eight flutes. It is perforated in the center to admit the shaft, which is riveted on top. The five-fluted head of No. b 2642 is undercut.

The star-shaped heads of Pins b 1874 and b 1852 (Fig. 202) are related to the fluted discoid heads. The heads of both pins are six pointed stars. Both heads are perforated to admit the shaft, which in Pin b 1874 protrudes on top. Incised lines ornament the shaft of Pin b 1852. The elaborately wrought star-shaped head of Pin b 1479 (Fig. 202) consists of six vertical wings, made by inserting three pieces of metal into the split shaft and fastening them by bending down the ends of the shaft. The shaft is ornamented with an incised herringbone pattern and horizontal grooves.

The plano-convex type of pin head is of course closely related to the discoid, conical, and semiglobular types. Pins b 2495 and b 2051 (Fig. 202) are plain. Others of this type have the common ornamentation of grooves on the upper shaft.

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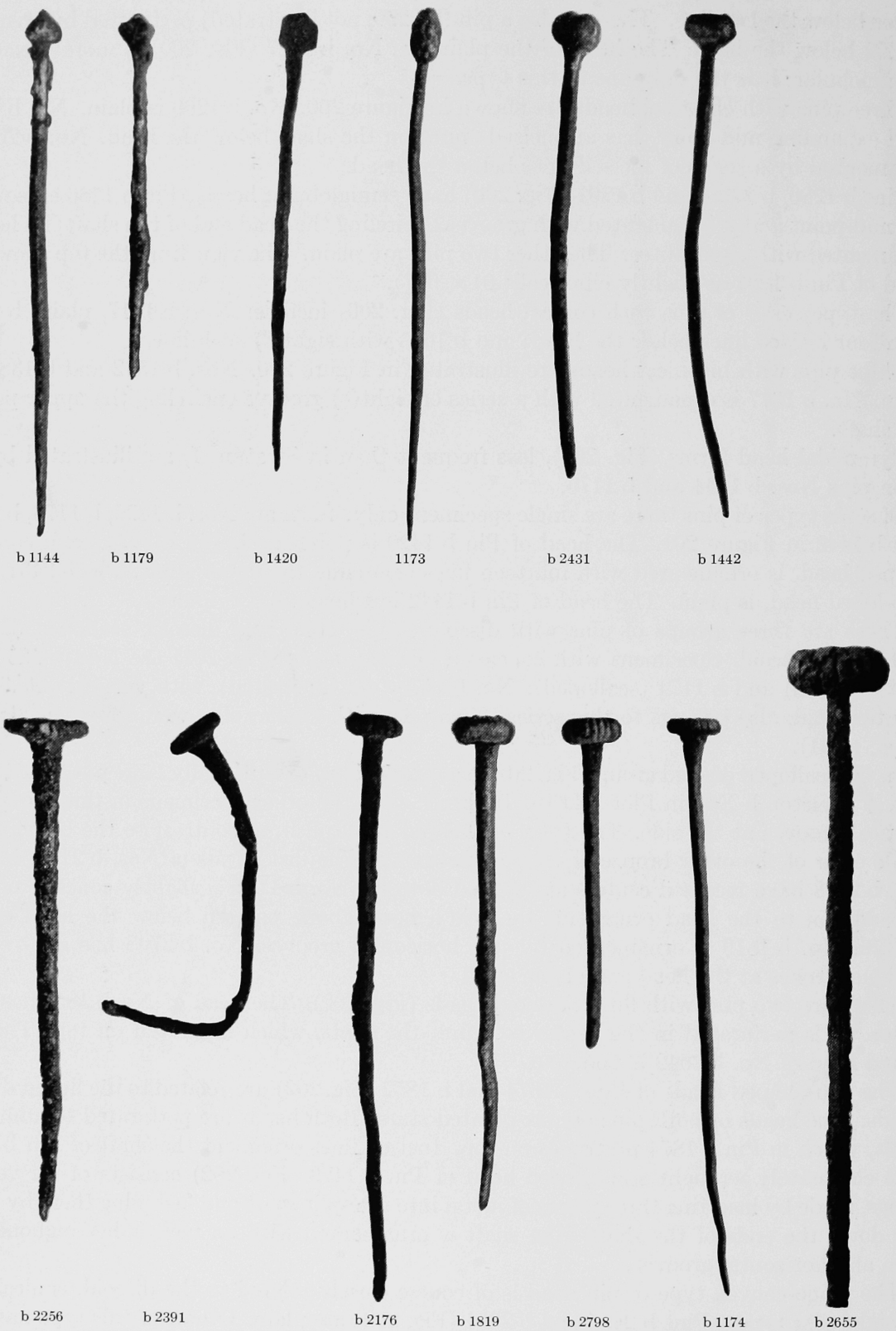

FIG. 201.—PINS OF COPPER OR BRONZE. ACTUAL SIZE

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b 1851 b 2642 b 1874 b 1852 b 1479 b 2495 b 2051

b 1418 b 2767 b 2301 b 1254 b 1904 b 1119 b 2206

FIG. 202.—PINS OF COPPER OR BRONZE. ACTUAL SIZE

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The coiled heads of the plain pins Nos. b 1418, b 2767, and b 2301 (Fig. 202) were made by rolling up the usually flat ends of the shafts.

The lanceolate head of Pin b 1254 (Fig. 202) is flat and bent at a right angle to the shaft. The shaft is flattened and perforated below the bend. No similar pin has been found.

Characteristic Alişar II pins are Nos. b 1904 and b 1119 (Fig. 202). On account of the close resemblance of their heads to those of the bone pins with conventionalized birds' heads (cf. Fig. 230) we assume that they had the same origin. The shaft of Pin b 2206 (Fig. 202) shows a rectangular cross-section; its head may represent a conventionalized animal head which may have been symmetrically repeated on the opposite side, as on the double-bird headed pins. This pin is unique.

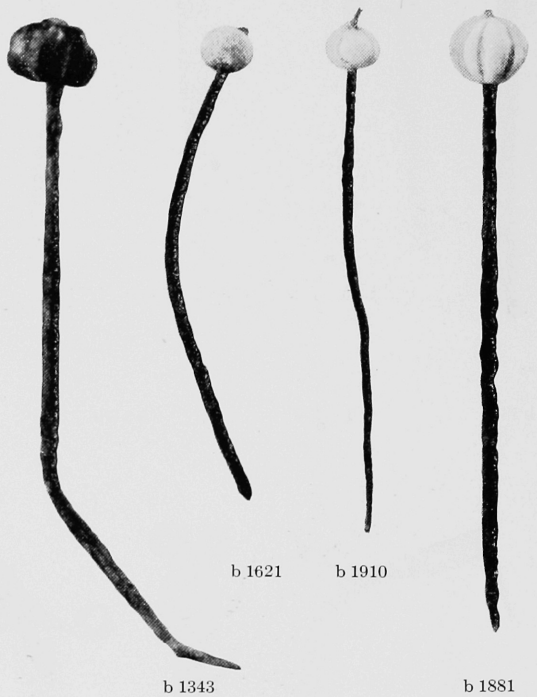

Fig. 203.—Pins of Copper or Bronze with Glazed Bead Heads. Actual Size

Another group of pins (Fig. 203) is very important on account of the material used for the heads; hence the circumstances of these finds must be considered.[1]

Pin b 1343 occurred in the refuse of Level 1 of Stratum II in Plot FF 10. Although it was found above the floor layer of this level, we do not hesitate to attribute the pin to Period II. The head is made of glazed frit. The surface of this elliptical bead head is black and grooved laterally by six flutes. A small square bronze or copper plate is used as a cap for the shaft perforation. The shaft expands in the middle.

Pin b 1881 occurred in Level 1 of Stratum II in Plot GG 9. Sterile dirt deposited during a subsequent occupation along the mound edge insured the remains of Alişar II in this plot against intrusion. The head of this pin is of white glazed frit, globular and ornamented with seven scallops. Light green shades on the head may come from the oxide of the pin. The shaft is stuck through the perforated head and bent over on top.

Since Pin b 1621 was found in Section 7[2] of Level 1 of Complex I (Plot FF 11), there is no

[1] It was not necessary to discuss the find-spots of the other specimens. The circumstances of each find were, however, carefully considered in associating specimens with a particular period.

[2] Find-room of Seal b 1529 with "Cappadocian symbol."

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doubt that it belongs to Stratum II. The white glazed frit head is a flattened globe attached like the head of No. b 1881.

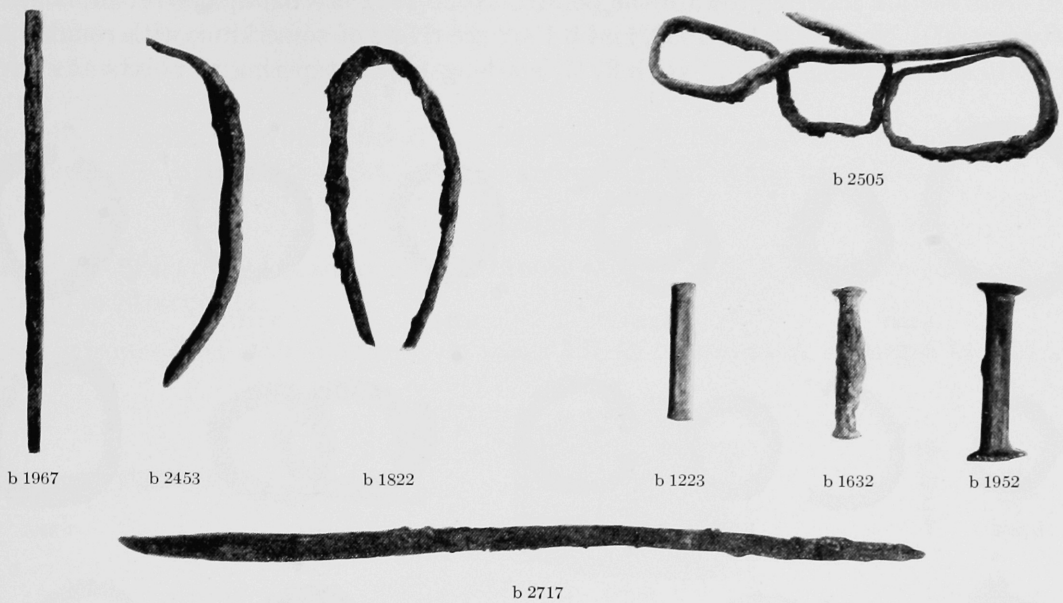

FIG. 204.—MISCELLANEOUS OBJECTS OF COPPER OR BRONZE. ACTUAL SIZE

FIG. 205.—MISCELLANEOUS OBJECTS OF COPPER OR BRONZE. SCALE, 2:3

Pin b 1910 occurred in Level 2 of Stratum II in Plot GG 10, below the hard floor of Section 1 of Level 1. There can hardly be better protection against intrusion from some later stratum than a hard-tramped floor of the same period. The roughly globular head of bluish white glazed frit is attached like the heads of the two preceding specimens, but the top of the shaft protrudes above the head.

We shall consider the pins with glazed bead heads as typical of Alişar II unless similar objects are found in other strata. Compare our discussion of glazed frit on pages 179 and 181.

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Some miscellaneous copper or bronze objects are shown in Figure 204. No. b 1967 is a rectangular wire fragment .0015×.0025 thick. The crescent-shaped No. b 2453 has a diamond-shaped cross-section tapering toward the points. No. b 1822 is a band, .006 broad, bent into a loop (tweezers?). Nos. b 1223, b 1632, and b 1952 are rivets of some kind, with roughly circular or rectangular cross-section. No. b 2717 is a long object tapering to points at each end.

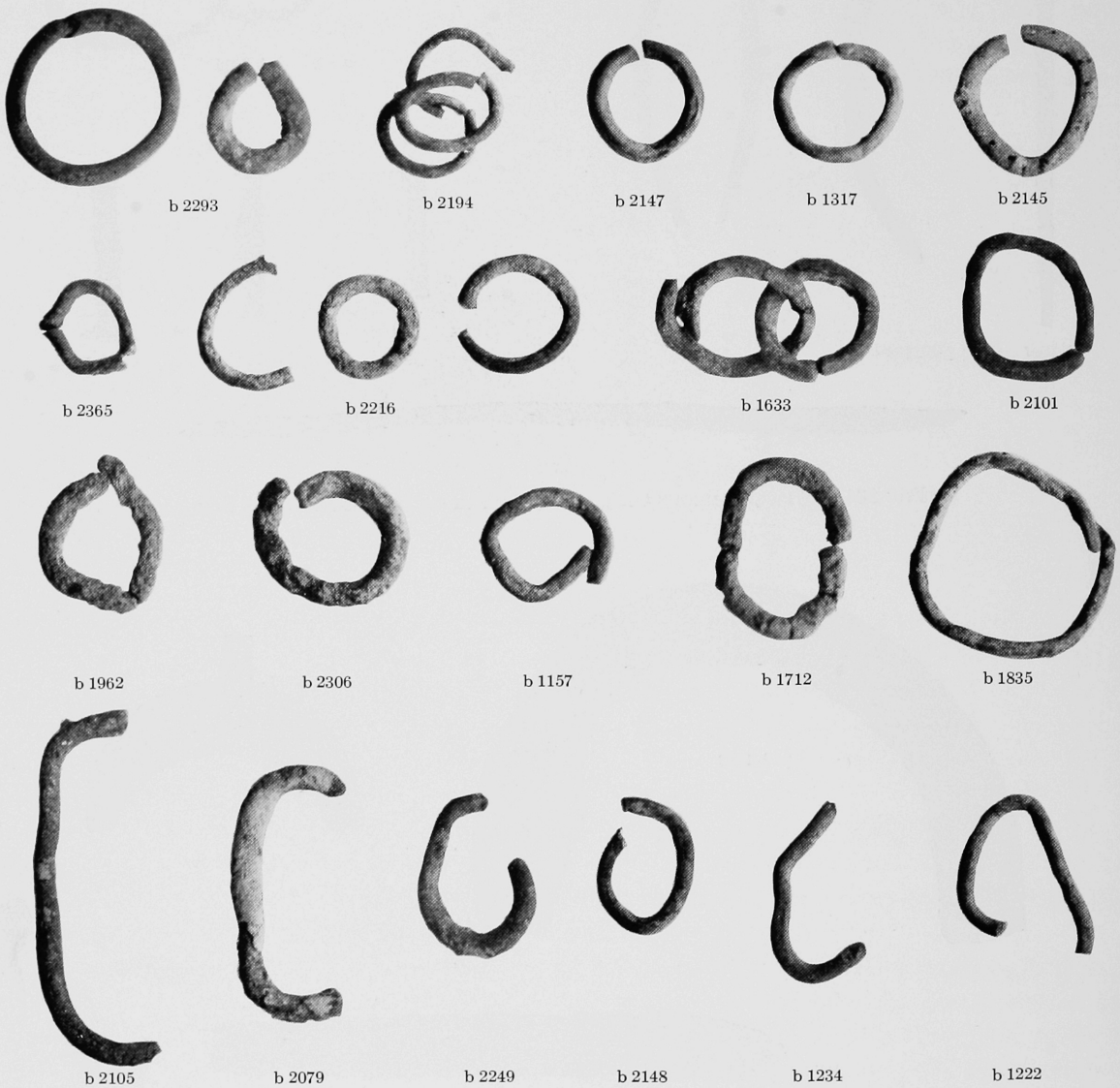

FIG. 206.—LEAD RINGS. ACTUAL SIZE

No. b 2505 is a wire, perhaps a bracelet distorted by pressure. No. b 2788 (Fig. 205), the attribution of which to Period II is somewhat doubtful, is a problematical fragment with rectangular cross-section (.006×.012). No. b 1915 (Fig. 205) is a crescent-shaped pendant(?) with broken-off points. There is a rolled projection on top, apparently for suspension. No. b 1033 (Fig. 205) is a semicircular fragment, roughly circular in cross-section (diameter, .016); one end is flattened and contains a rivet.[1]

[1] As shown in our photograph, this object suggests a serpent, with the rivet heads for its eyes. However, serpent figures other than this questionable one were lacking in Stratum II except for those held by a two-headed bird on Seal b 1854 (Fig. 182) and the bird-headed serpent(?) on an ivory plaque found in 1930 (No. c 2573, to be published later).

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LEAD

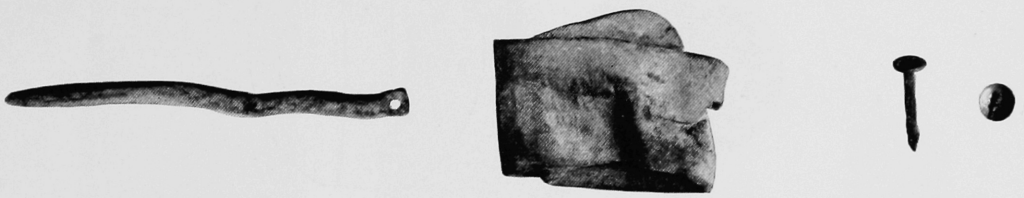
Small lead rings (Fig. 206) were apparently used as small change. The two interlocking rings of No. b 1633 indicate that this assumed lead money was kept in the form of chains. Several series of rings or ring fragments were found together (Nos. b 2293, b 2194, and b 2216). The collection includes various sizes, and therefore various weights, of rings, and both closed and open specimens.

Lead objects other than rings are shown in Figure 207. No. b 2509 is a lead band pressed out of shape. No. b 2149 is a point flattened and perforated at the head end.

GOLD

A convexly discoid gold head on a small bronze tack (b 1339, Fig. 207) was the only bit of gold found in Stratum II.

Metal figurines have been described on pages 127–28; metal seals, on pages 148–49.



b 2149 b 2509 b 1339

FIG. 207.—TWO LEAD OBJECTS AND A COPPER OR BRONZE TACK WITH GOLD HEAD. ACTUAL SIZE

STONE OBJECTS

There are only a few objects of stone from Stratum II which show a superior technique and an advanced material culture as compared with the stone specimens of Alişar I and III. Many objects are identical with types of Alişar I, such as ring-shaped mace heads, a hammer of the type of No. b 39 (cf. Fig. 71), flake knives, a hammer ax, celts, polishing-stones, mills and grinders, pestles, small polished stones, and quartz crystals.[1] Objects which differ from types found in Strata I and III or in some cases in any other stratum are: pear-shaped mace heads, a finely wrought hammer, a small hammer type, certain whetstones, peculiar oblong tools with depressions, molds, and globular stones. The kinds of stone used for the Alişar II specimens seem to be the same as those employed by the Alişar I people.

Ring-shaped mace head No. 3288 (Fig. 208) shows sufficiently the identity of this type in Stratum I and Stratum II (see p. 62). This specimen is of diorite, almost globular. The surface is polished. Some ring-shaped mace heads have straight tubular perforations; others have perforations ending in conoid holes, the broader opening being apparently at the base.

Pear-shaped mace heads (Fig. 208) appear for the first time in Stratum II.[2] Mace head b 1810 is made of hematite. There are some rust-colored stains on the steel-blue surface. The top and the bottom of the perforation expand abruptly, and the base is continued by a rather thin ring. Hematite, of course, is extremely difficult to shape, and especially to perforate. Only three mace heads (or fragments) made of this material have been found, all in Stratum II.[3] It is thought that they were imported.

Mace head b 2601 is of gray diorite. The originally polished surface is badly battered. A

[1] Stone door sockets are like those of Period I; they were described on page 33 and in the discussion of architecture of Stratum II. Cf. also p. 30, n. 3.

[2] A mace head of this shape (792) occurred also in the uppermost level of Period IV in Plot 30 of 1927. See *OIP* VII 77.

[3] Another hematite mace head is illustrated in *OIC* No. 11, Fig. 138.

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flattened area near the top may be due to faulty stone. The perforation expands at the base in the same manner as that of No. b 1810. Compare also Globe b 1125 on page 172.

Hammer 3289 (Fig. 209) represents an advanced type as compared with the Period I specimens. It is unbored, though a perforation had apparently been begun. The surfaces of the hard stone are carefully wrought and smoothed.

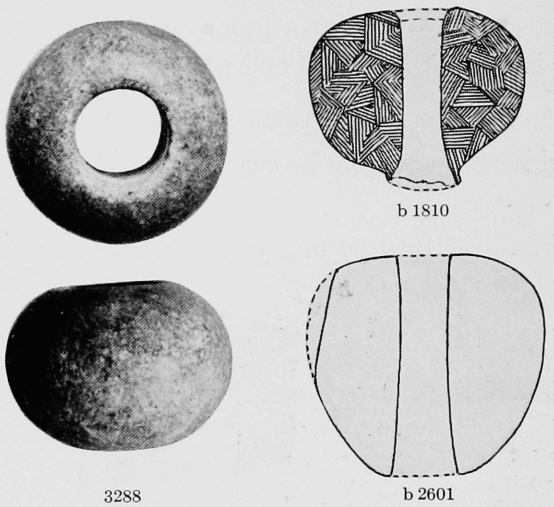

FIG. 208.—A RING-SHAPED MACE HEAD OF STONE AND DRAWINGS OF PEAR-SHAPED MACE HEADS. SCALE, 1:2

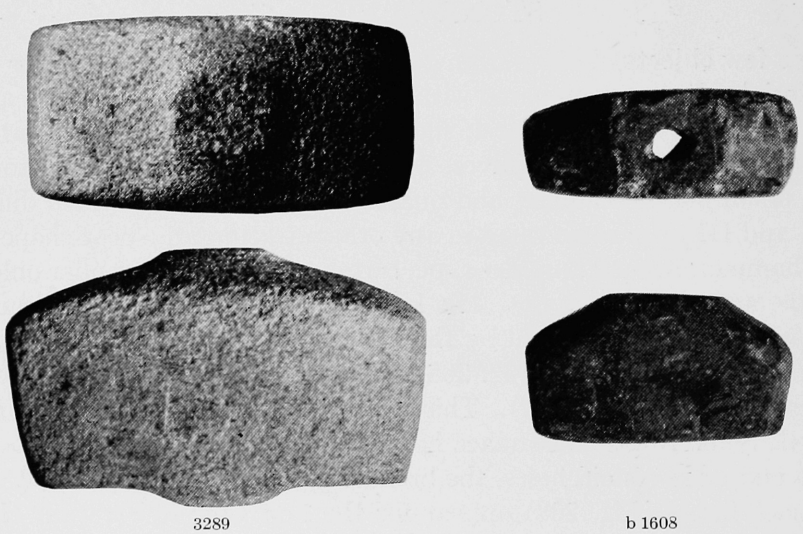

FIG. 209.—STONE HAMMERS. SCALE, 1:2

The hammer type illustrated by No. b 1608 (Fig. 209) cannot have been used for heavy work. It is made of purplish serpentine, polished all over except for the battered rectangular hammering areas. While the base is flat, the center of the top is elevated. The central perforation is rather narrow.

Ten flake knives, saws, or scrapers occurred in the Alişar II levels. Four of them are shown in Figure 210. They are identical with those found in Stratum I (see p. 63). No. b 2024 is of brown chalcedony. The edge is retouched all around and serrated for the larger part. No. b 1803 is yellowish brown. The entire edge is retouched and serrated. This specimen may

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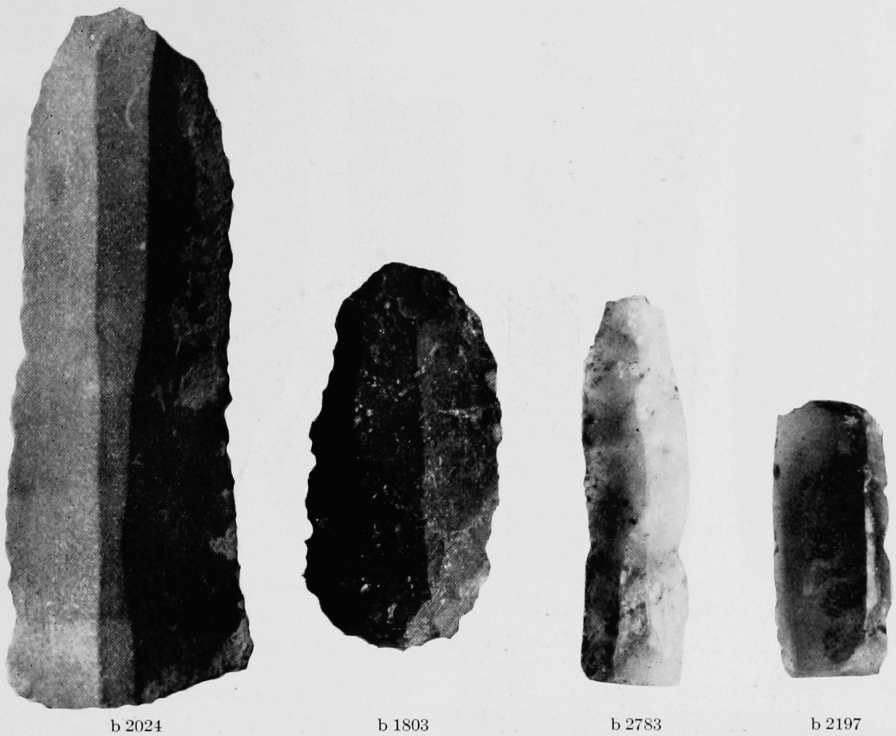
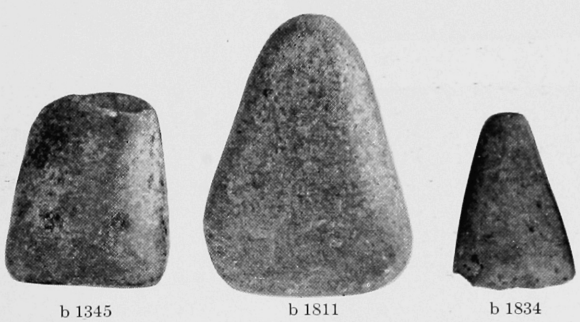
well have been used as a scraper. A quartz flake (b 2783) and an obsidian flake with very sharp cutting edge (b 2197) are of the usual type.

The celts from the Alişar strata have little value as chronological guides. Those from Alişar II (Fig. 211) are not distinct from celts obtained in the other layers. No. b 1345 seems to be of gray-green diorite, and No. b 1834 is made of hard gray rock. No. b 1811 is somewhat softer.



b 2024 b 1803 b 2783 b 2197

FIG. 210.—CHALCEDONY AND OBSIDIAN FLAKES. ACTUAL SIZE



b 1345 b 1811 b 1834

FIG. 211.—STONE CELTS. SCALE, 1:2

Nos. b 1345 and b 1811 both have blunt "cutting" edges, almost suggesting use as hammers. All three specimens thicken toward the handle end, and the blade sections are polished.

The whetstones (Fig. 212) of Period II are thin slabs of hard rock, perforated as a rule through one end. They resemble closely those of Alişar V. There are rectangular specimens such as No. b 1501 and one with a tapering point, No. b 776. No. b 2519 is cylindrical and converges at the perforated end to a sharp edge, while the head of a similar whetstone (b 969) ends in a knob. There is an additional groove across the top. No. b 1833 has a flattened handle with biconoid perforation. The thinner whetting end is broken. The cylindrical handle of No.

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b 1902 has a concave top and is perforated near its base. The whetting part is ground off in the middle and converges to a rounded point. No. b 2315 (Fig. 213) seems to be a whetstone of a different type. It is a rectangular slab of smooth sandstone with some striations due to use.

FIG. 212.—WHETSTONES. ACTUAL SIZE

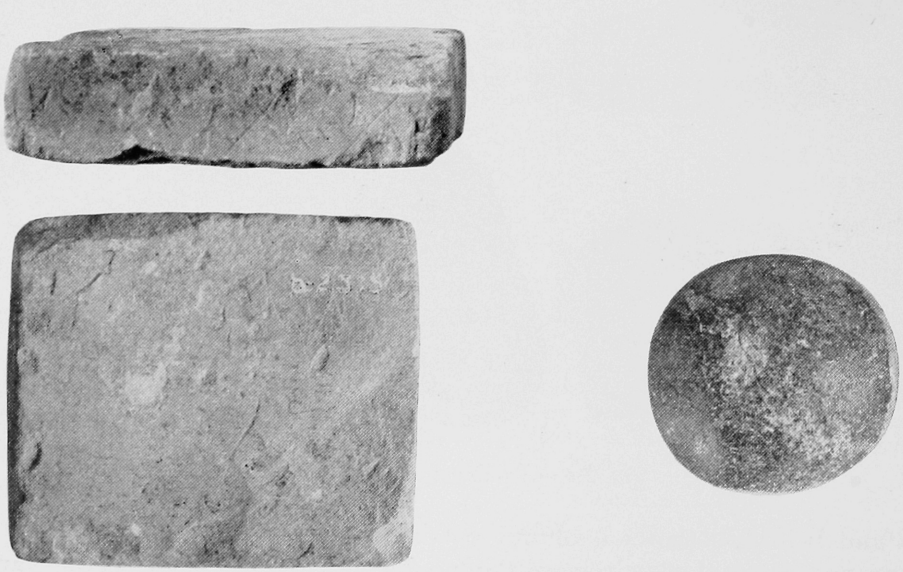

FIG. 213.—WHETSTONE AND POLISHING-STONE. SCALE, 1:2

The well wrought polishing-stone No. b 2448 in Figure 213 is made of diorite. Its color is grayish green, and the base of this semiglobular specimen is highly polished by use.

A peculiar type of tool (Fig. 214) occurred in Stratum II only. It is a hard oblong stone with roughly rectangular base; the ends converge toward the perforated head end. There is always

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a more or less polished depression in the center of the base, suggesting that it was a polishing tool for finishing ends of other objects. This tool occurred as frequently as the whetstones and must therefore have been used commonly. The specimens here illustrated (Nos. b 2690, b 2753,

Fig. 214.—Stones with Depression at Base. Scale, 1:2

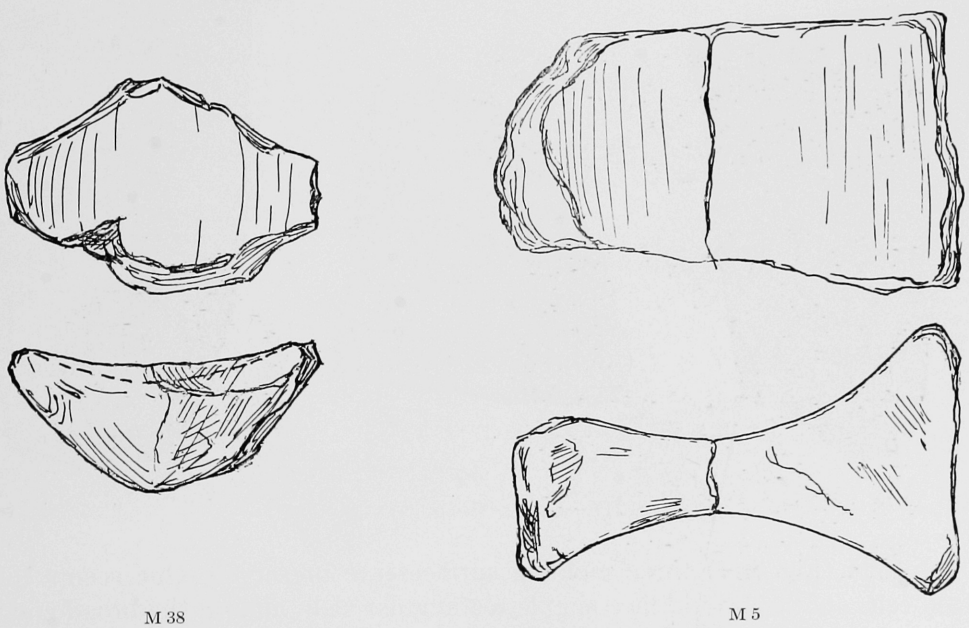

Fig. 215.—Hand Mills. Scale, 1:10

b 1486, and b 1655) show the uniformity of this type of tool; there are slight modifications of the base form and of the dimensions. Nos. b 2690 and b 1655 are made of quartzite. The perforation of No. b 1655 is unfinished.

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Hand mill M 38 is like those found in other strata from Period I through Period IV. One unusual mill, M 5, was uncovered west of the burial chamber (Section 9) in Complex I. It has two concave grinding surfaces on opposite sides of the roughly rectangular rock. Both mills are illustrated in Figure 215.

The pestles (Fig. 216) of Period II do not show any distinctive features. No. b 1485, of polished diorite, is roughly rectangular, with convex ends roughened by use. No. b 1530, also of diorite, with roughened convex ends, is somewhat trapezoid.

b 1485 b 1530

Fig. 216.—Stone Pestles. Scale, 1:2

b 1693

Fig. 217.—Stone Mold. Actual Size

On No. b 1693 (Fig. 217) three molding surfaces are preserved. One seems to be for a blunt-edged celt, another would fit a simple rectangular slab, and on the broad end there is a circular depression. The rock is grayish green serpentine. Compare the pottery molds described on pages 123 and 136.

The stone beads (Fig. 218) found in Stratum II are made of serpentine, carnelian, alabaster, and siliceous stone.[1] They do not excel in beauty or workmanship the beads from other strata.

[1] Other beads are described on pages 179 and 181.

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There are two globular or roughly globular carnelian beads (Nos. b 1299 and b 965) with polished surfaces. Their color shades are red with dark red. Beads b 2070 and b 689 are made of dark gray-brown serpentine.

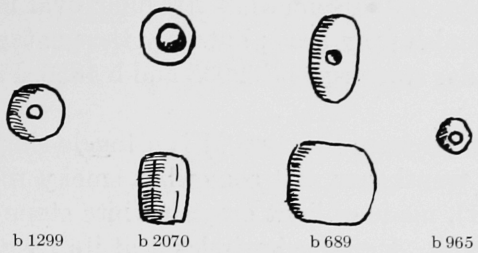

FIG. 218.—STONE BEADS. ACTUAL SIZE

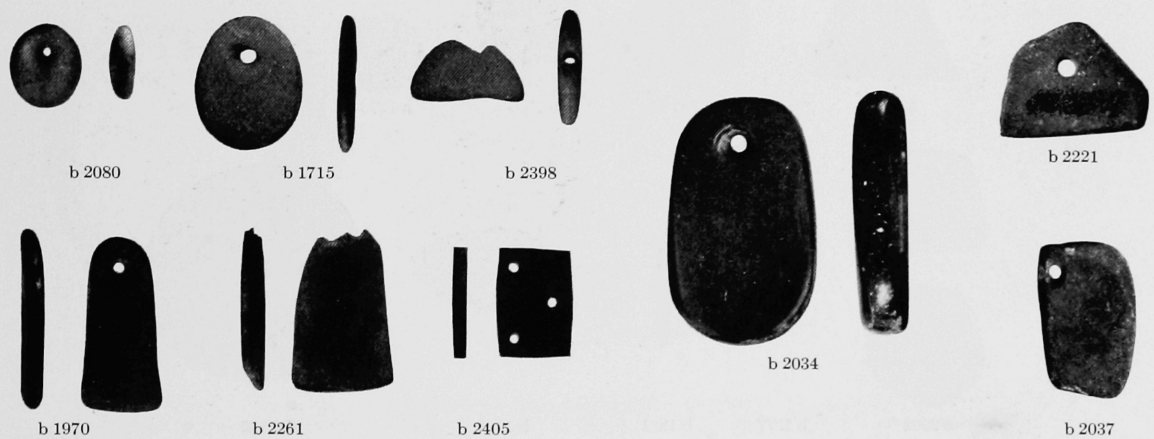

FIG. 219.—PERFORATED STONES. SCALE, 1:2

FIG. 220.—STONE RINGS. SCALE, 1:2

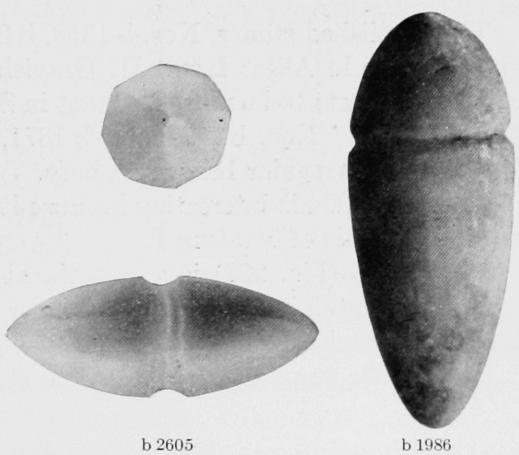

FIG. 221.—STONE ORNAMENTS. ACTUAL SIZE

Nos. b 2080, b 1715, and b 2398 (Fig. 219) may be pendants. The first two are perhaps natural pebbles, gray, oval, and perforated near one end. No. b 2398 is grayish white and translucent, apparently alabaster. It is roughly semicircular, with a notch at the top and a vertical perforation. There are three gray slate pendants (Nos. b 1970, b 2261, and b 2405,

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Fig. 219) with one, two, and three perforations respectively. Some of the other perforated stones may have been used as pendants, but most have problematical purpose. No. b 2034 (Fig. 219) is the best wrought specimen. It is made of highly polished grayish black diorite. The perforation near one end of the somewhat irregular oval is biconoid. Nos. b 2037 and b 2221 (Fig. 219) are of greenish gray slate; but only the pentagonal specimen No. b 2221 is unbroken. Two crude irregular stone rings (b 2035 and b 1856, Fig. 220) are of reddish brown sandstone.

The most beautiful ornament from Stratum II is a toggle-shaped object (No. b 2605, Fig. 221) of light grayish white translucent but somewhat smoky rock (rock crystal?). Another object (No. b 1986, Fig. 221), made of light grayish white stone (alabaster?), may also be a pendant. It is oval and smooth. A groove encircles it at its greatest diameter.

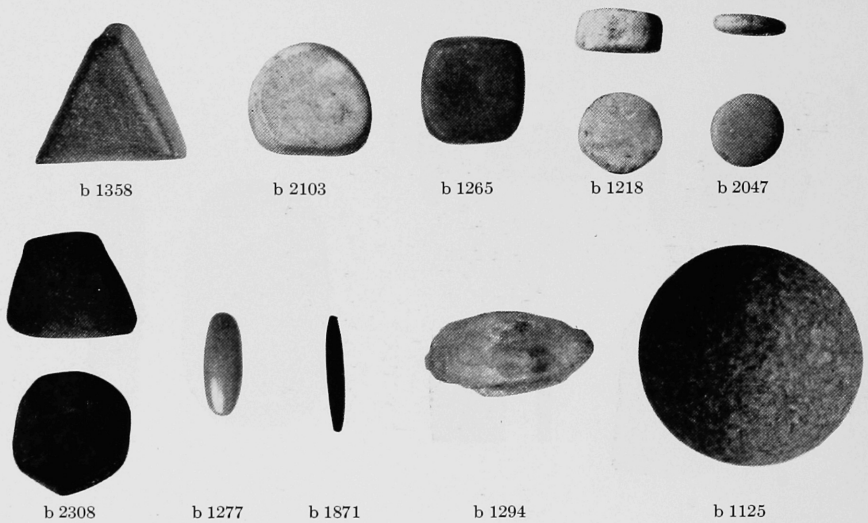

Fig. 222.—Miscellaneous Stone Objects. Scale, 1:2

Three polished stones, Nos. b 1358, b 2103, and b 1265 (Fig. 222), illustrate the identity of such objects in Alişar I and II. Grayish white, button-like specimens such as Nos. b 1218 and b 2047 seem to be more frequent in Stratum II. In addition to the highly polished hematite "spindles" Nos. b 1277 and b 1871, there is a truncated conoid hematite object, No. b 2308, with irregular hexagonal base.

Crystal b 1294 is interesting because it has been artificially pointed, in contrast to the unworked crystals of Stratum I.

No. b 1125 (Fig. 222) is a smooth, almost perfect globe, shaped from a hard gray stone (granite?) containing light gray quartz crystals. It may be an unfinished mace head, or it may have been used in its present form.

Stone seals, stone door sockets, and stone spindle whorls have been described above.

BONE OBJECTS

The series of bone objects includes characteristic guide specimens of Alişar II such as small ornamented boxes, ornamented slips, polished tubes, points, ornamented awls, great numbers of pins, some with conventionalized double-bird heads, and some miscellaneous objects. Less characteristic specimens are plain spatulate flakes, plain awls, knucklebones, and perforated animal teeth.

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Bone boxes were apparently containers for valued possessions, perhaps jewelry. The exterior surface of one of these, No. b 1929 (Fig. 223), is covered with a design of fine and coarse incised lines and a band with one row of centered circles.[1] The bottom is now missing; but there is a vertical perforation through each of two offsets at the contracted base. Probably these holes were to fasten the bottom to the body in the same manner as in a smaller box of the same type found in 1927.[2] The edges of the top and bottom are polished, while the interior is rather rough.

No. b 1813 (Fig. 223), light brown and smooth, was possibly the lid of Box b 1929. Faint concentric rings encircle the central perforation on one side, while the other side is plain and slightly conoid.

Polished tubes made from bones cut off at both ends (Fig. 224) are frequent in Stratum II. A few such tubes were found in Stratum I, and similar objects occur in Stratum V also. Many of these tubes are made of the long bones of quadrupeds. Some, however, are made of birds'

b 1929 b 1813

FIG. 223.—ORNAMENTED BOX AND LID(?) OF BONE. SCALE, 3:4

bones. Most of the tubes are curved, and in many cases one or both ends are slightly serrated by use. Their length ranges from that of No. b 2500 (.032) to that of No. b 2330 (.142). The color is light brown or brown.

Most of the polished and ornamented bone slips (Fig. 225) occurred in Section 5 of Level 1 in Complex I. One type is ornamented with concentric rings, arranged as a rule in two irregular rows. Perforations occur in this type of slip, indicating that they were fastened to other objects (furniture?) as ornamentation. The concentric rings with centered dots are so perfectly executed that they must have been drawn with the aid of a mechanical device (cf. Box b 1929). The second type of slip is ornamented with lines crossing irregularly. The fragments of this type are smaller than those of the first series.

The bone flakes of Stratum II (Fig. 226) are better wrought than those of Stratum I and are supplied with handles. No. b 714 has a perforation in the handle. The handle of No. b 1088 is broken. Nos. b 1971 and b 774 are small spatulas; apparently their pointed ends were stuck into separate handles. All these flakes are polished like those of Period I.

There are several varieties of awls. An ornamented type (Fig. 227) cannot have been very efficient, to judge from some blunt points preserved. They may have had another purpose. No. b 1292 is ornamented with panels of incised oblique lines and crosshatchings separated by series of three to six grooves. The awl point No. b 1231 has crosshatched panels only, separated by three grooves. An ornamented awl (b 1139) shows an inverted conoid head with a very

[1] Not until the time of the Hittite Empire (Alişar IV) were such rings with central depressions again encountered.

[2] *OIP* VII 122.

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FIG. 224.—BONE TUBES. SCALE, 3:4

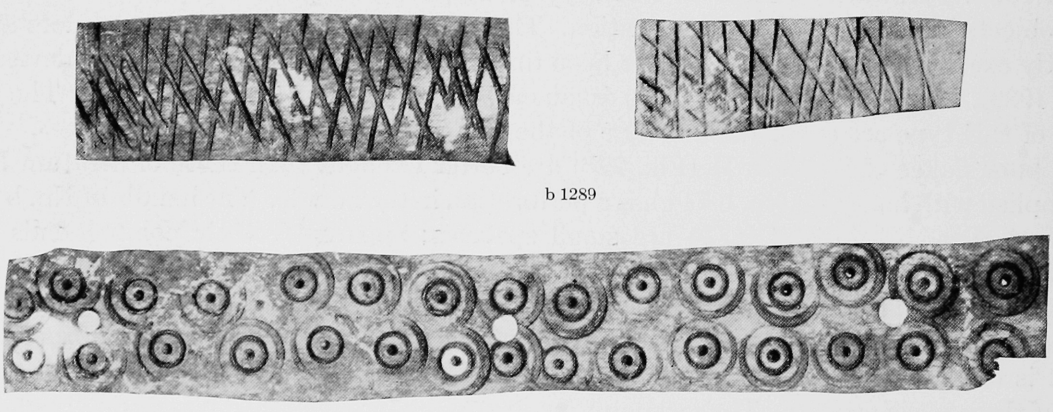

FIG. 225.—ORNAMENTED BONE SLIPS. ACTUAL SIZE

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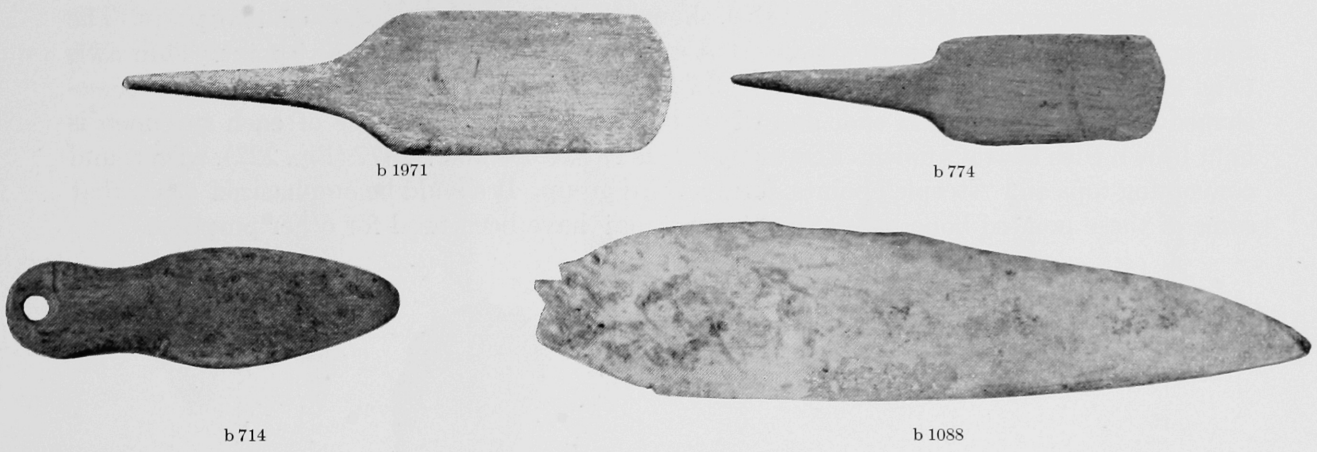

FIG. 226.—BONE FLAKES WITH HANDLES. ACTUAL SIZE

FIG. 227.—BONE AWLS. ACTUAL SIZE

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small vertical perforation. Four faintly incised grooves are preserved near the fracture. A similar but unornamented head (b 1873) shows that the tool consisted of two parts. The thin end of the preserved part was inserted into the hollow top of the awl point. Thin awls (Fig. 227) occur in Stratum I also. Point b 723 seems to be of horn. Awl b 1050 has a cross-shaped incision on the head end, and the point is missing. The surface of each specimen is light brown with lustrous finish. Flat awls such as Nos. b 685 and b 2377 (Fig. 227), with round converging tops and "steeple" points, form a third group. It should be emphasized again that some of these pointed bone tools called "awls" may have been used for other purposes.

Fig. 228.—Bone Awls. Actual Size

Nos. b 2139 and b 2380 (Fig. 228) may be either pins or small awls. The top of No. b 2139 ends in a crudely carved head representing that of a human being. The mouth seems to be marked by an incised stroke. Nos. b 2095 and b 2074 (Fig. 228), though definitely associated with Stratum II, are in no way distinct from Stratum I specimens. The type of awl-shaped object illustrated by No. b 1032 (Fig. 228) has been found in Period II remains only.

Augerlike points (Fig. 229) are characteristic of Alişar II. Many of them resemble blunt arrowheads; but the polished point, contrasting with the rough surfaces of other parts of the implement, suggests possible use in a rotating motion. The thin tapering end was probably inserted in a handle of wood, bone, or metal which rested on the offset of the point.

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Bone pins are guide objects of Stratum II. The head of No. b 2254, in the form of two clearly outlined birds' heads, helped us to understand Nos. b 2263 and b 2076, which are more conventionalized (Fig. 230). On the upper part of the shaft of Pin b 2254 is an incised design

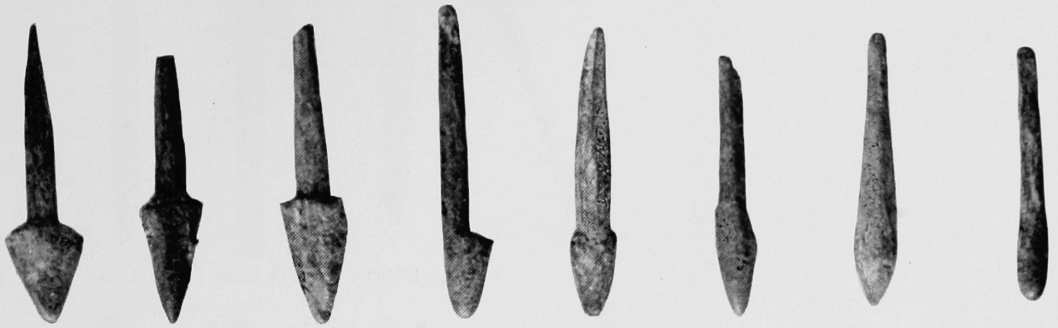

FIG. 229.—AUGERLIKE POINTS OF BONE. ACTUAL SIZE

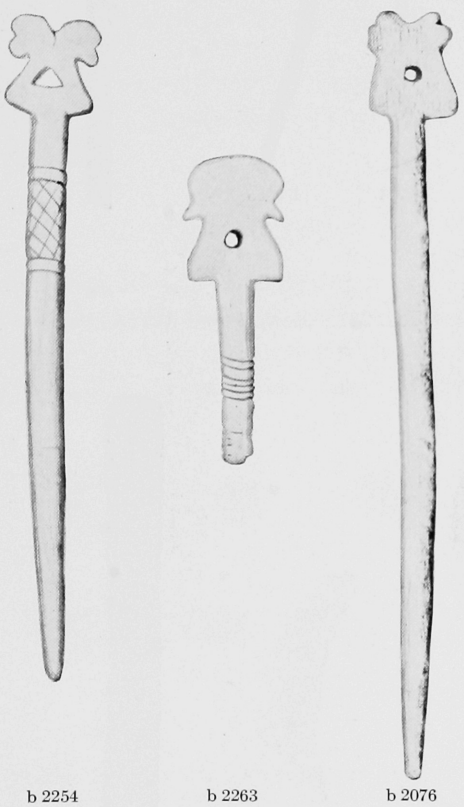

FIG. 230.—BONE PINS WITH DOUBLE-BIRD HEADS. ACTUAL SIZE

of crossed lines, bordered above and below by two parallel lines encircling the shaft. Pin b 2263 has a spiral incision on the upper part of the shaft.

One hundred and thirteen well preserved plain bone pins and many fragments were found during the season of 1929. These pins (Fig. 231) are all smooth, and most of them highly polished. Each has a slender shaft, either straight or curved, with a sharp point and a definite

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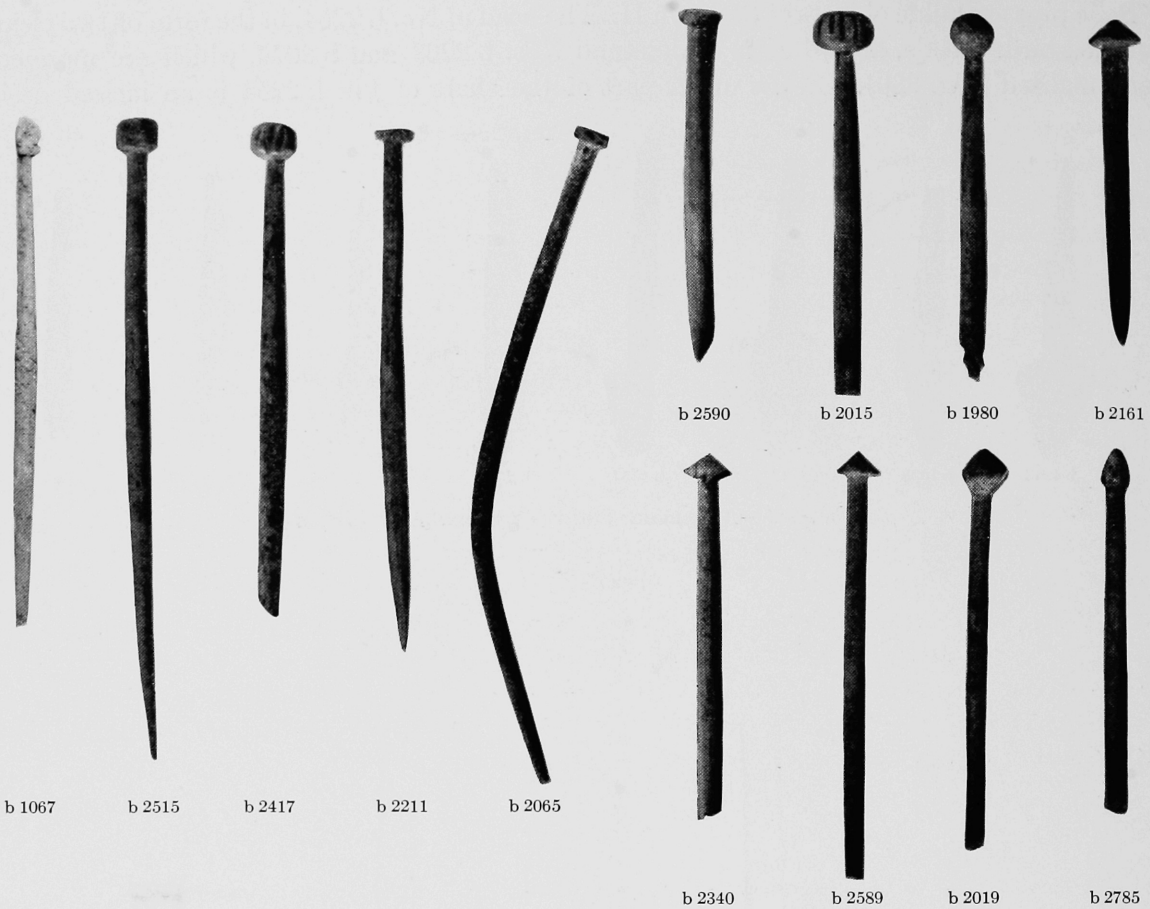

Fig. 231.—Bone Pins. Actual Size

Fig. 232.—Miscellaneous Bone Objects. Actual Size

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head. Some broken specimens had been repointed. Very often the shaft is thickest in the center; sometimes it is flattened. A few of these pins are ornamented with faint spiral incisions on the upper shaft. The heads show a variety of forms. Though the circular disk is the commonest, there are also rectangular, globular, and semiglobular heads. Other forms are conical, convexly conoid, convexly biconoid, pyramidal, upright oval ("bud-shaped"), and horizontal oval ("bean-shaped"). The head of No. b 1067 seems to be a conventionalized form of the human head (cf. b 2139, Fig. 228). In some cases the side of the head has an incised design.

No. b 722 (Fig. 232) illustrates a series of perforated hemispheres with straight-cut bases. They are parts of femur heads, apparently of humans. The association of these objects with Period II is doubtful. One of them occurred in the refuse layer between Levels 10 and 11 of Plots L 14–15, far below the top of Stratum I. The others were found in individual test plots outside of Complexes I and II, in levels where Period II remains prevailed. One specimen was found in the top refuse of Stratum II in Plot FF 19. Their purpose is problematical. Perhaps they were used as charms.

In addition to single perforated knucklebones, found in Stratum II as well as in other strata (cf. p. 30, n. 3), eight unperforated joints were found with Skeleton b X22 in Plot DD 20.

There is also a section of a horn (No. b 1914), cut off straight. A perforated animal tooth, No. b 2409, served as an ornament. Perhaps it was part of a necklace. No. b 1066 is a round piece of bone flattening toward the bifurcated end.

An ivory "Ishtar" head (1967) was found in 1927.[1] Since a small ivory shoe (a 430), found in Stratum III but probably of Period II workmanship, may have been a seal, it is described with the other bone seals on page 148.

GLAZED FRIT(?)

It is not possible to state definitely at the present stage of the excavation that the beads here illustrated (Fig. 233) were actually made by the Alişar II people. It is a well known fact that small objects particularly are liable to migrate within the culture deposits because of building activities, burrowing by small rodents, and the like. Had it not been that glazed

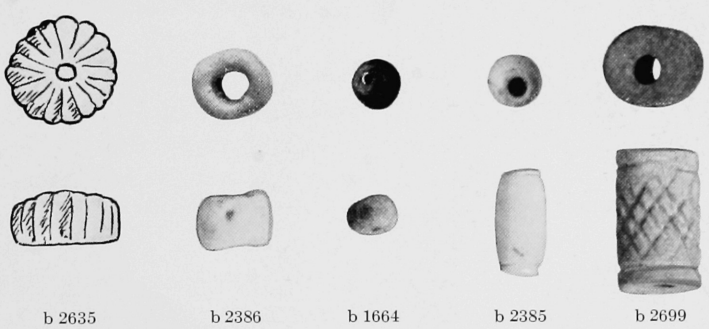

Fig. 233.—Glazed Frit Beads. Actual Size

Cup b 1868 (Color Plate III) and certain metal pins with glazed frit heads were found in layers which belonged to Stratum II, we would have hesitated to attribute any of these beads to Alişar II times.

A ring-shaped bead, No. b 2386, found in Level 1 of Complex I, is coated, in addition to some darker stain, with a light green-blue glaze similar to that on Cup b 1868. The conoid bead No. b 1664, found under the same conditions as No. b 2386, is gray and somewhat iridescent.

[1] See *OIP* VII 37.

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Fig. 234.—Shells. Actual Size

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A white tubular bead (b 2385) of fayencelike material was found in the uppermost Period II level of Plot BB 19. There is an incised line around each aperture. The glazed frit bead No. b 2635 (Fig. 233) is a light purple disk with scalloped edge. It was found in the same layer as cuneiform tablet No. b 2700 in Plot J 33.

Cylindrical bead No. b 2699, with a grayish purple glazed surface, is made of rather hard material resembling fayence, though it may be hard frit. It too was found in the same layer as the cuneiform tablet in Plot J 33; but it has exactly the design and shape of Bead b 575, which is associated with the bottom layer of Period V in Plots F–G 8. The pattern of crossed lines is bordered above and below by an incised line encircling the bead.

The evidence for the use of glazed frit in Period II is, then, as follows:

1. Cup b 1868 (cf. p. 111) was found in a layer definitely associated with Period II remains.
2. Pins with glazed frit heads were found in clearly defined layers of Stratum II (cf. pp. 162–63).
3. Some of the beads found in Stratum II resemble the surface of Cup b 1868.
4. Of three spindle whorls with blue-green glaze, one, No. b 564, occurred in a layer where Alişar II sherds were mixed with those of later periods (cf. pp. 126 f.).
5. An "Ishtar" figurine (No. 2296),[1] identical with the whorls in technique and colors, occurred in Plot XIII of 1927 (Z 12) in a layer 2.70 deep where Alişar II remains were frequent.

SHELLS

The bulk of the shells found at Alişar occurred in Stratum II (Fig. 234). Some are unwrought (e.g., Nos. b 2123 and b 2224); others, probably used as pendants, are perforated at the top or side (Nos. b 1247, b 1248, and b 1496). A few (Nos. b 1156, b 1705, and b 1706) contained small stones within their perforations, a device apparently employed to keep a thread in place.[2]

DISPOSAL OF THE DEAD

The burial customs of Period II resemble those of Period I. Urn burials and plain inhumations occur in both strata. So far urn burials have been found in no other layer.

A definite burial chamber of Period II was uncovered in Level 1 of Complex I (Section 9). In addition, it seems that it was a custom in both periods to bury individuals below the floors of rooms.

The dead of Period II were buried in individual urns, as in Period I, or in two urns placed mouth to mouth. In cases where two urns were not long enough to accommodate an extended body, the bottom of one was broken, and the legs were stuck through the hole into a third vessel. All these vessels were apparently imbedded in *kerpich*.

As a rule, in the common burial chamber the adults were buried in an extended position, while the skeletons of children were flexed. All the adults buried elsewhere seem to have been in a contracted position. This difference is significant. It may indicate different dates of disposal or a mixture of groups having different customs; or perhaps the adults buried in the common burial chamber were of one family and had a special status in the community. There was no orientation in traditional or sacred directions.

It is significant that the most striking vessels found in Stratum II accompanied the dead of the burial chamber. Some of the persons buried outside were accompanied by typical Period II bowls. Bronze or copper ear pendants and pins were found with skeletons in the burial chamber and elsewhere.

In the upper Complex II level (Level 1) we encountered persons who had not been buried at all. The evidence shows that they had died by violence.

[1] *OIP* VII 37.

[2] Exactly the same method is used by the American Indians.

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Thirty-one skeletons in all were found in Stratum II in 1928 and 1929.[1] In the mortuary chamber alone sixteen bodies had been deposited. Infant mortality must have been high, for there were about as many skeletons of children as of adults. Few skeletons were well preserved, but many skulls and bones may be restored.

BURIALS IN SECTION 9, LEVEL 1, COMPLEX I

The architecture and general find-conditions in this room have been described on page 88. Figures 235–36 show the locations of the burials.

Skeleton b X23 (Fig. 237), of an adult male, was buried in three urns joined together. Its position was extended and dorsal. The arms were probably extended. The lower legs were severed from the femora and placed in the third urn. The orientation of the urns and of the skeleton was 10° east of north, the skull being north. The bones were poorly preserved. There was a fragment of the pelvis and one of the right humerus. The skull was shattered and powdery, the maxillary vanished, and the teeth settled into the earth. Mortuary gifts were a small pot (No. b 1426) near the left elbow, two more pots (Nos. b 1427 and b 1428) slightly more toward the feet, and a bronze ear pendant (No. b 1429) at each ear.

Skeleton b X24 (Figs. 237–38) was found in two urns laid mouth to mouth, close to the urns of Skeleton b X23. The position was dorsal, and the legs were extended. The position of the upper body is problematical because of the poor preservation of the bones. Apparently Vessels b 1424 and b 1425 had been placed one at either side of the head. Bronze or copper Pin b 1423 lay between them.

Skeleton b X25 (Figs. 237–38), lying beside the lower right leg of No. b X24, may be the remains of a child of that person.

Skeleton b X28 (Figs. 239–41), an adult male, furnished another interesting example of an extended burial. It lay in two large storage vessels placed mouth to mouth. A fragment of a third vessel covered the feet and lower legs. The pots were inclosed by *kerpich*. The position was dorsal; the skull, with open mouth, lay on its left side. The arms were flexed, and the hands rested above the sternum. The legs were extended. The pelvis had been disturbed, probably during the disposal of Skeleton b X23; it lay at the knees with one leg above it, the other underneath. The bones, particularly the lower extremities and pelvis, were fairly well preserved. The mortuary gifts were a bronze or copper pin under the left *caput femoris* and Pitcher b 2544 on the right side of the body between the right *caput humeri* and the elbow.

Of Skeleton b X29 (Fig. 240), infans I (1–7 years), only the cranium and the right femur remained. They were found in the middle vessel of Skeleton b X28. The skull, lying on its face, was a few centimeters to the right of the right femur of No. b X28. The femur of No. b X29 was below the skull. Those parts preserved were in fair condition. The mortuary gifts could not be separated from those of Skeleton b X28.

Skeleton b X31 (Fig. 242), of an adult female(?), was in two burial urns placed mouth to mouth, resting in a *kerpich* matrix. The position of the skeleton was dorsal. The legs and arms were extended, the latter alongside the trunk. Preservation was poor. The skull, arms, and trunk were disintegrated. The lower vertebrae were in position. The lower extremities and pelvis were in better condition, but light and pithy. The mortuary gifts were bronze or copper Pin b 2650 on the chest near the right clavicle; one bronze or copper ear pendant (b 2648) at the left side of the skull; a bronze or copper blade fragment (b 2651); the point of a polished and incised awl(?) (b 2647); and Vessel b 1670 beside and above the right femur. Two more vessels (b 1671 and b 1672) leaning against the outer wall of the eastern burial urn may have been mortuary gifts either of Skeleton b X31 or of No. b X32. The latter (cf.

[1] For burials uncovered in 1927 see *OIP* VII, chap. i.

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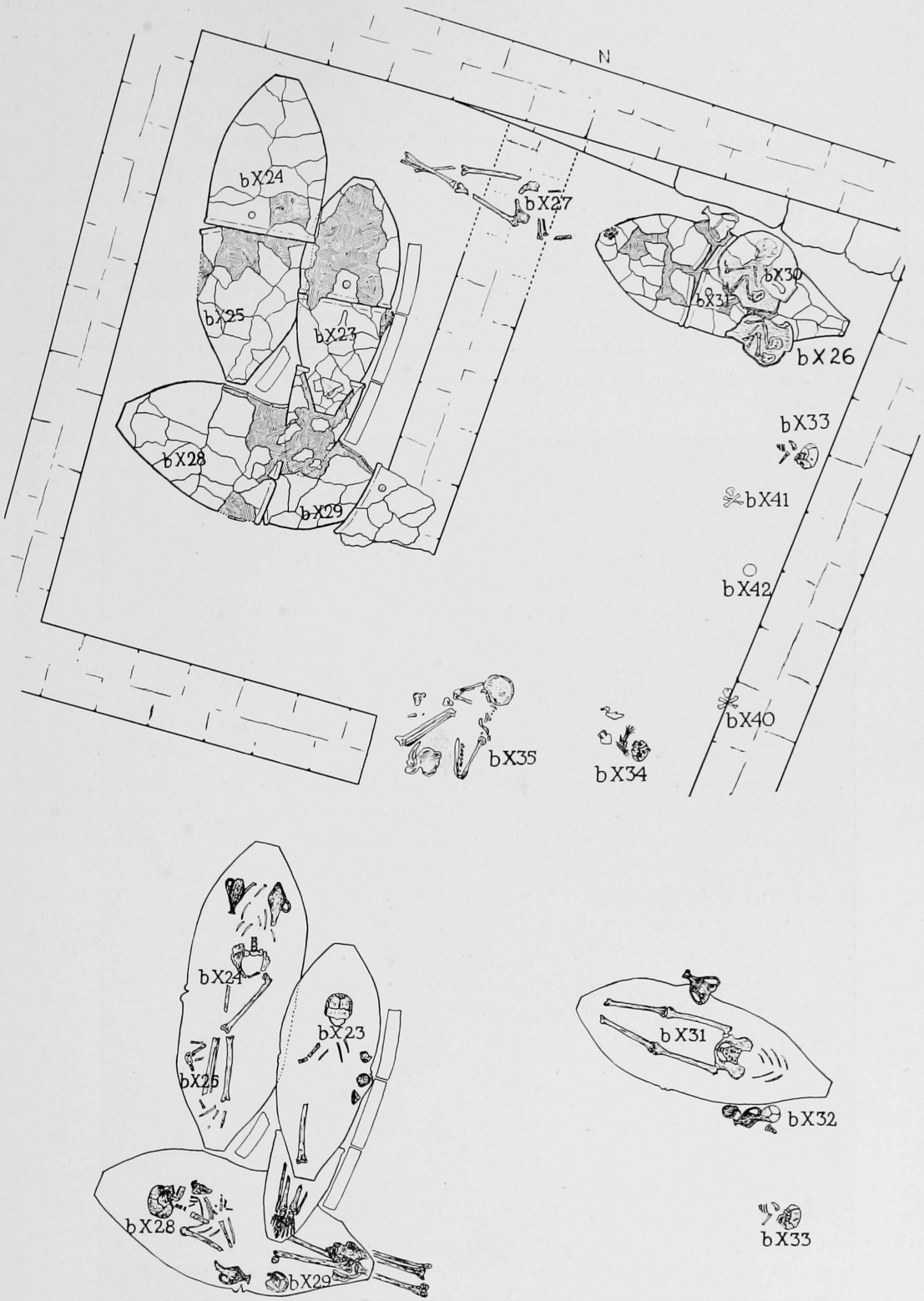

Fig. 235.—Diagrams of Burials in Section 9, Level 1, Complex I. Scale, 1:40

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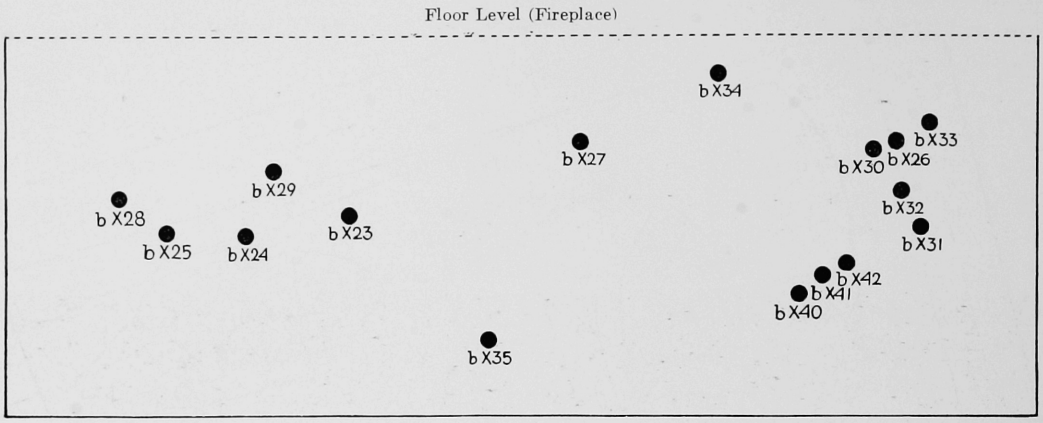

Fig. 236.—Cross-Section of Burial Chamber, Showing Find-Spots of Skeletons. Scale, 1:40

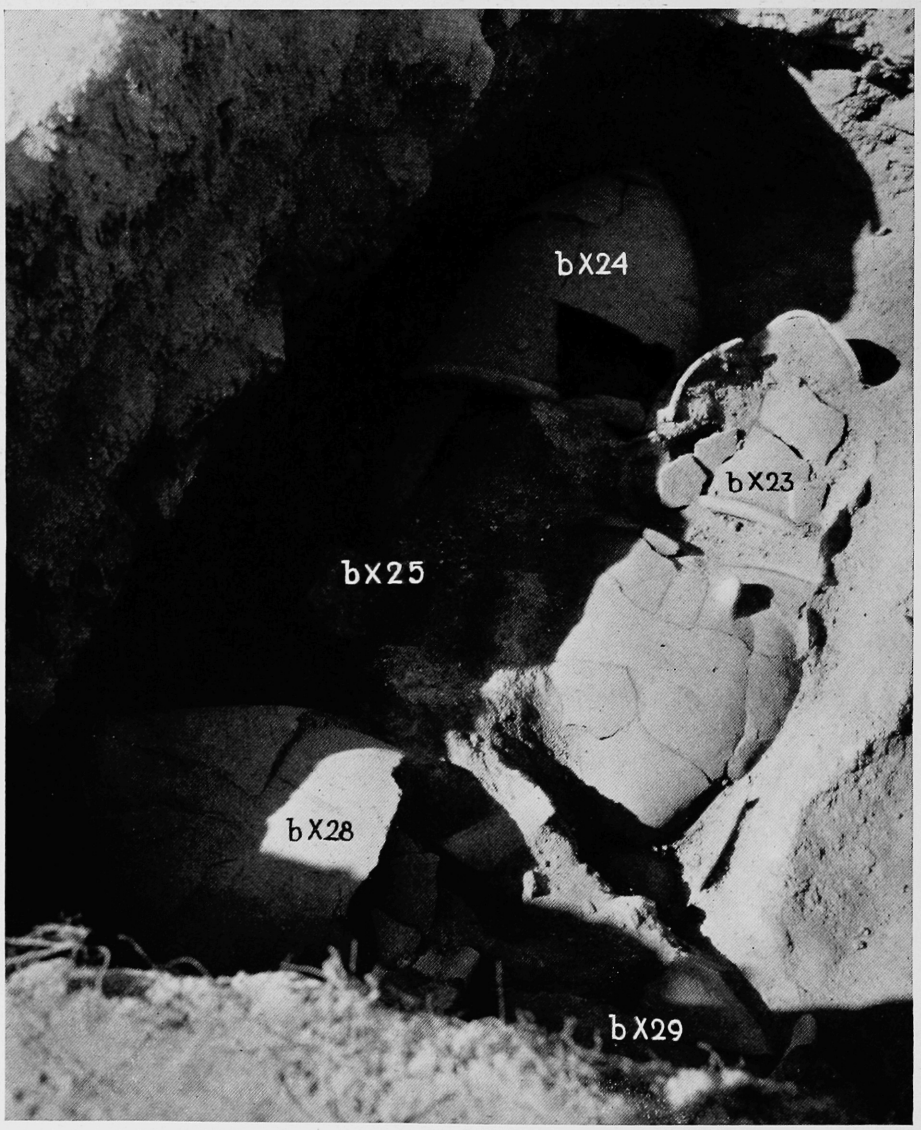

Fig. 237.—General View of Burials b X23–25, b X28, and b X29, from the South

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Figs. 235–36) had been disturbed and pushed aside, apparently during the interment of Skeleton b X31. Skeleton b X30, infans I, was on top of Burial b X31 (cf. Fig. 235). It was covered with fragments of a pot.

Skeleton b X26 (cf. Fig. 235), infans I, was .55 below the floor of Level 1, somewhat higher than No. b X31. Its single burial urn was broken. The skeleton was lying on its right side when found, but there are indications that it may have been set upright originally. The legs were flexed. Almost the entire upper body was missing; but the lower extremities, the pelvis, and the left ulna were in fair condition. There were no mortuary gifts.

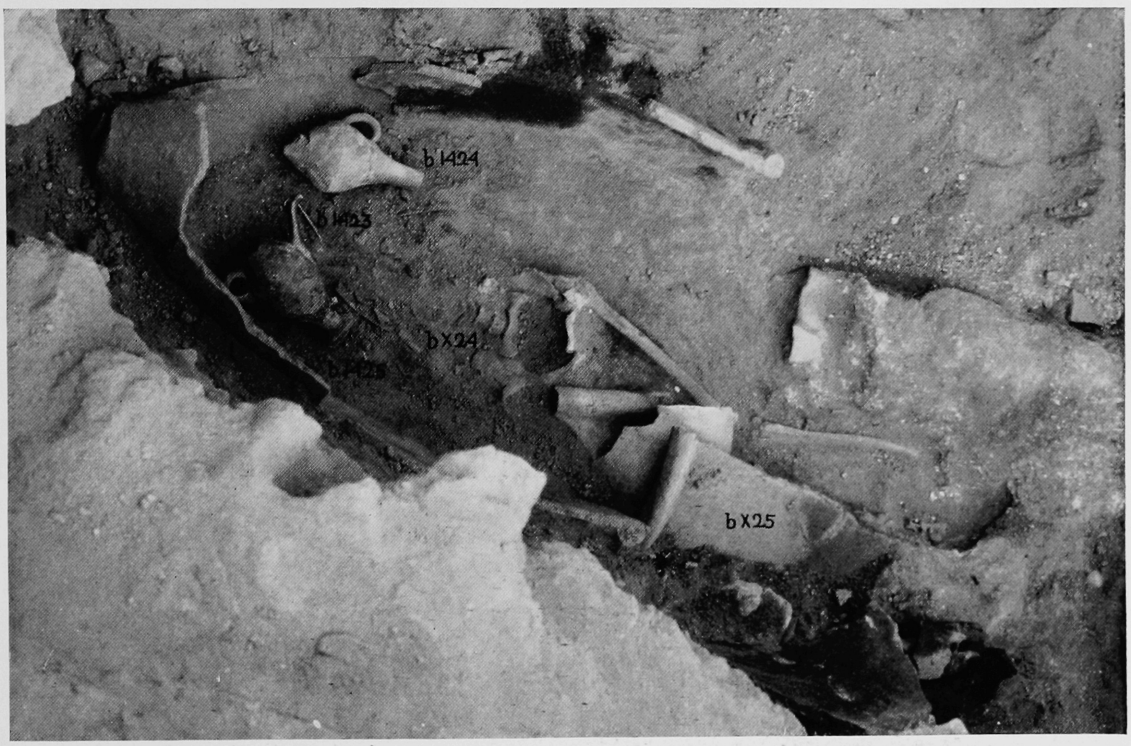

Fig. 238.—Burials b X24 (with Mortuary Pottery) and b X25

Skeleton b X27, that of an adult male(?), was on top of an earlier wall (cf. Fig. 235). The position was dorsal, and the legs were extended. The arms were flexed, the hands lying across the lumbar vertebrae. The preservation was poor; only powder indicated the position of the skull. There were portions of the pelvis and fragments of the long bones. The arrangement of pottery fragments suggests that the skull may have been inclosed in a vessel of medium size. There were no mortuary gifts.

Skeleton b X33 was that of a small child, buried with contracted legs. There were no mortuary gifts.

Skeleton b X34 also was that of a small child (infans I). Two pottery vessels (Bowl b 1673 and Pitcher b 1674 with two handles) found above this burial may have been its mortuary gifts.

Skeleton b X35 (Fig. 243), of an adult woman, appeared below the other burials (cf. Fig. 236). It lay on its right side. The legs were contracted, both arms were flexed, and the head rested on the right hand.

Three skeletons of children were at a lower level in the burial chamber than any of the other burials except No. b X35 (cf. Fig. 236). Skeleton b X40, infans I, lay on its right side, with

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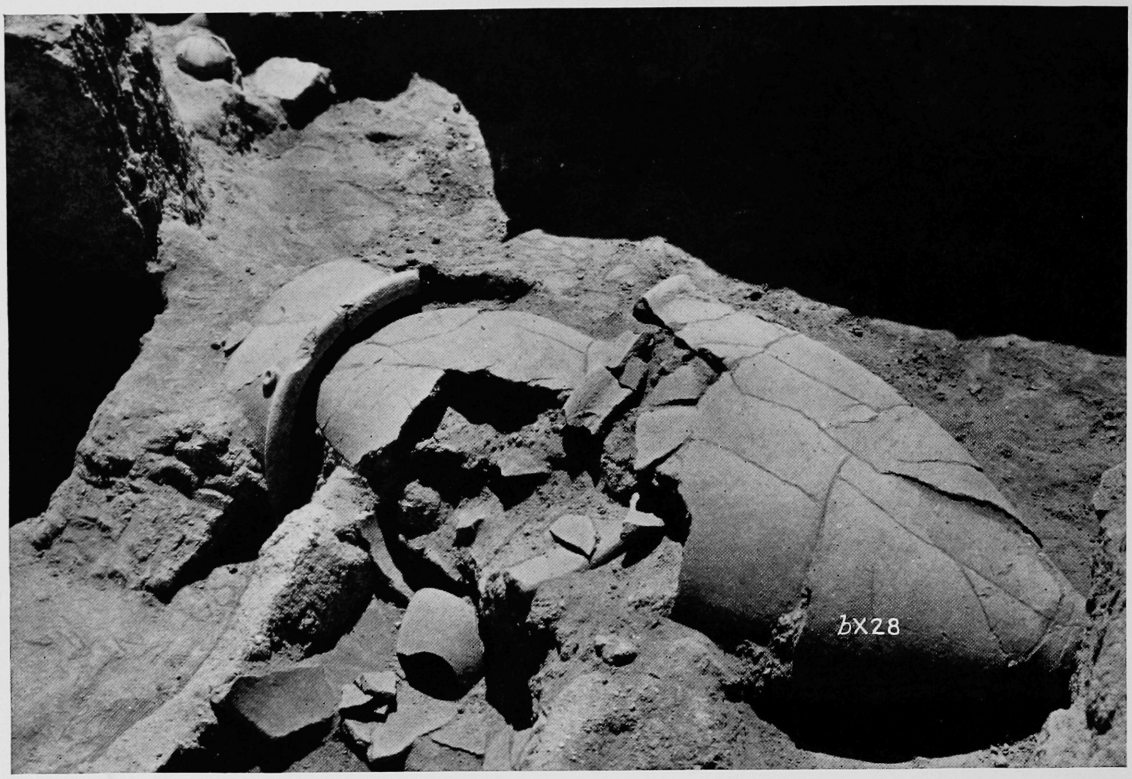

FIG. 239.—URNS OF BURIAL b X28

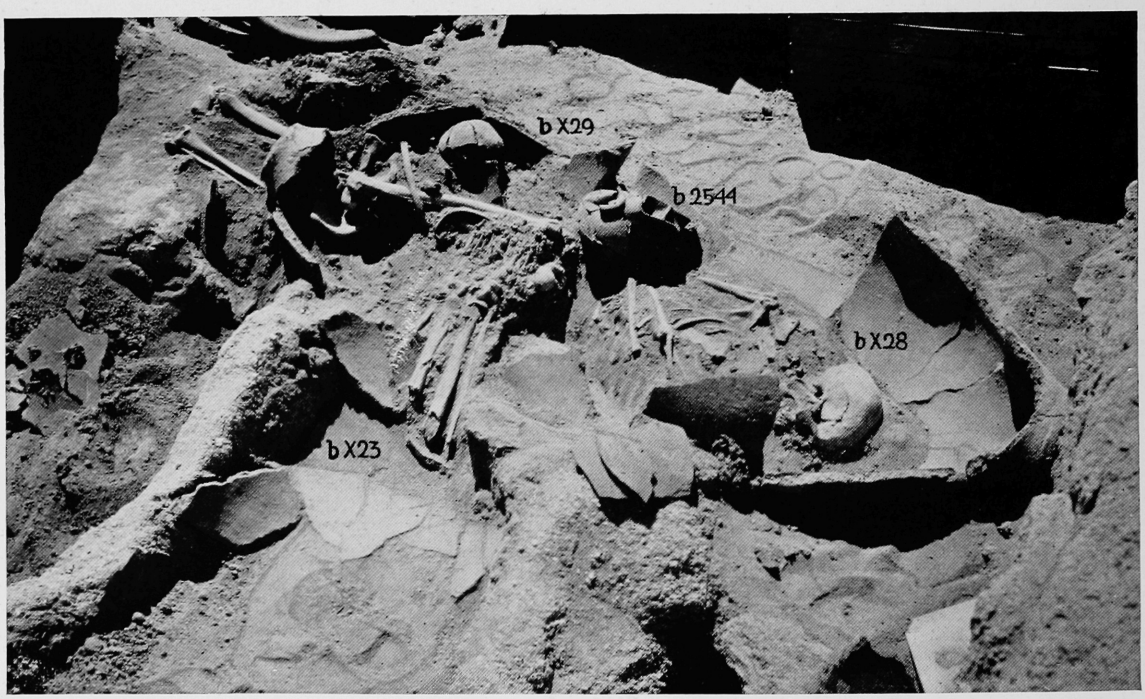

FIG. 240.—SKELETONS b X28 AND b X29 WITH MORTUARY POTTERY

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FIG. 241.—SKULL OF NO. b X28

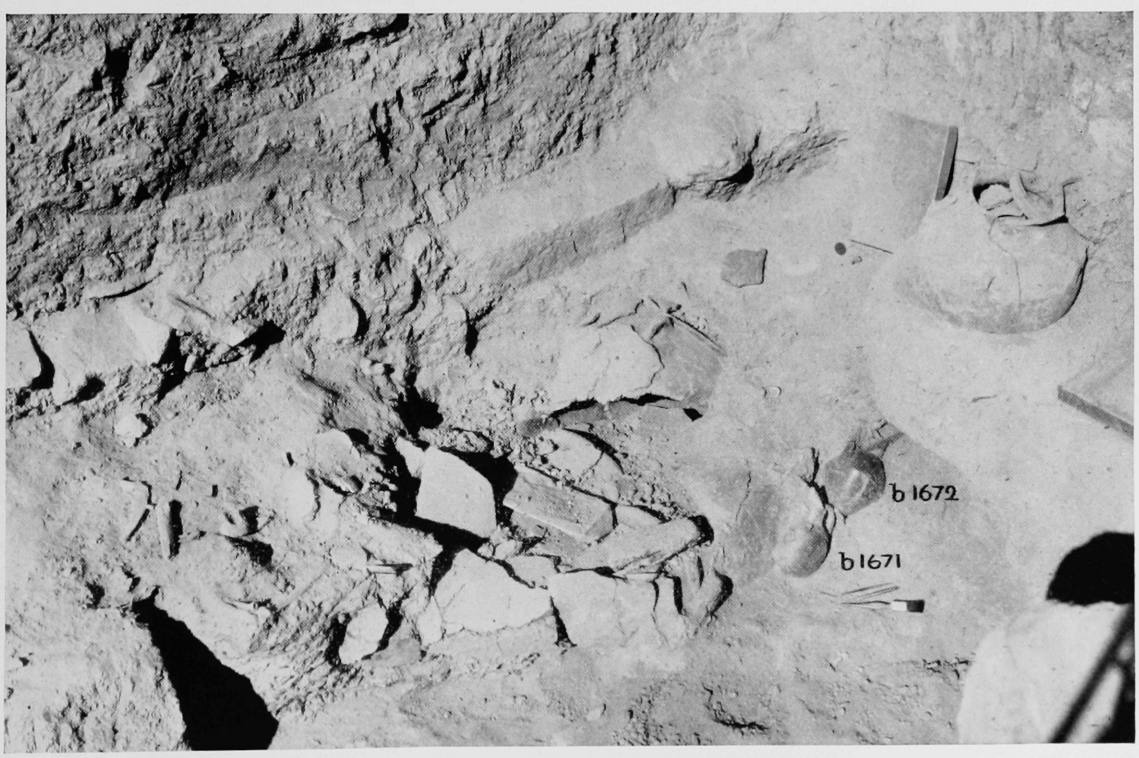

FIG. 242.—MORTUARY POTTERY LEANING AGAINST URN OF SKELETON b X31

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arms and legs flexed. The preservation was fair. There were no mortuary gifts. Skeleton b X41, infans II (7–14 years), lay on its left side in a contracted position. Only a few frag-

Fig. 243.—Skeleton b X35

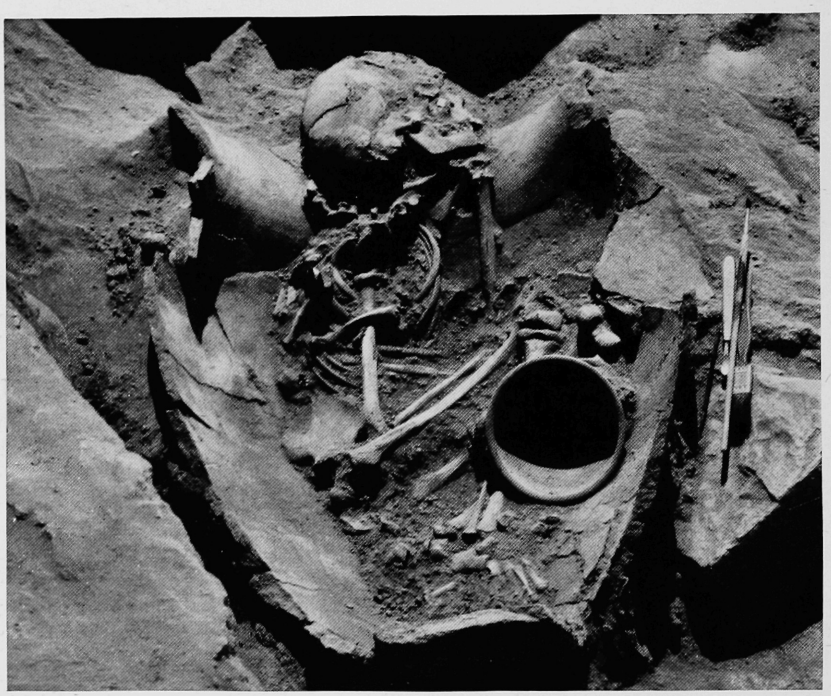

Fig. 244.—Skeleton b X22 with Typical Alişar II Bowl

ments were preserved. Two bronze or copper ear pendants lay near the left ear. Of Skeleton b X42, infans I, only a fragment of the skull remained. There were no mortuary gifts.

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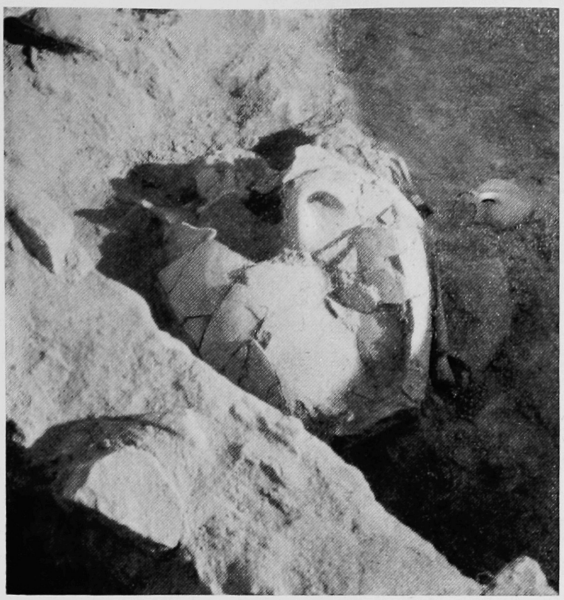

FIG. 245.—BURIAL b X22 WITH TYPICAL ALIŞAR II PITCHER

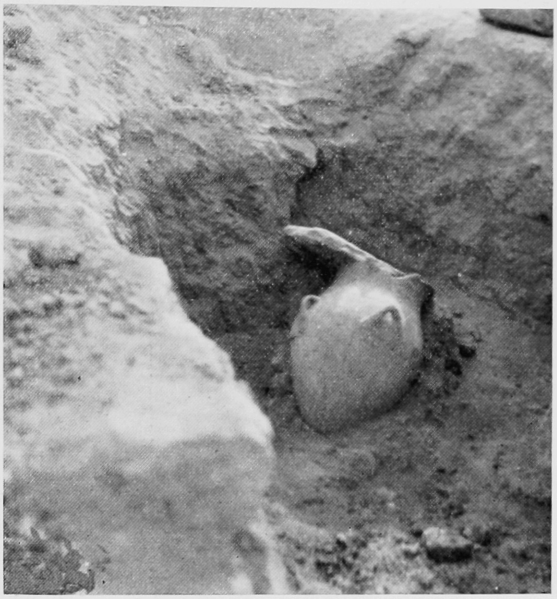

FIG. 246.—BURIAL b X36

FIG. 247.—SKELETON b X37 FROM THE SOUTHWEST

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INDIVIDUAL BURIALS

Skeleton b X2, of an adult or senile person, was found in Plot X 19 at a depth of 3.20. Only the underside and some fragments of the burial urn remained, and no cover slab was found. The legs were contracted. Only fragments of the right humerus, the left femur, and the right tibia were preserved. There were no mortuary gifts.

Skeleton b X22 (Figs. 244–45) was uncovered below Section 7 of Level 1, Complex II (cf. Fig. 248). It was deposited in a typical Period II burial urn (b 2549). It lay on its left side, with contracted legs. The head protruded beyond the orifice. Two characteristic Alişar II vessels accompanied the burial. Bowl b 1430 rested on the lower right leg of the skeleton (Fig. 244); Pitcher b 1325 lay outside the urn (Fig. 245). An incised stone whorl (b 1431) of Alişar I type and eight knucklebones of sheep were also inside the pot.

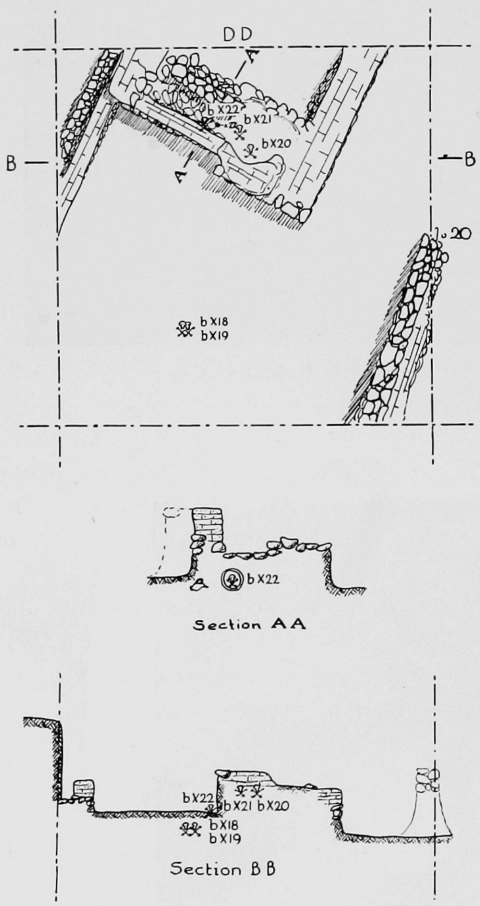

Fig. 248.—Plan and Cross-Sections of Plot DD 20, Showing Find-Spots of Skeletons b X18–22. Scale, 1:200

Skeleton b X36, infans I, was found in Plot CC 19 below the floor. The burial urn (b 2543, Fig. 246) has been described on page 119. Its orifice, pointing southwest, was closed by a large slab. The skeleton lay on its left side, with legs and arms flexed. The bones were well preserved. A lead ring of the type used as small change(?), found near the left side of the head, had apparently been used as an ear pendant.

Skeleton b X37 (Fig. 247), an adult male, was uncovered in the small Section 18 of Level 2, Complex II.[1] The person had been buried in the plain earth, apparently above the floor level. The skeleton lay on its right side, with contracted legs. Fragments of a typical Alişar II bowl were close by.

Four skeletons which had not been buried were found in Plot DD 20 in Level 1, the last occupational level of Stratum II (Fig. 248). There is no doubt that the senile person whose skeleton we call No. b X20 had met with a violent death. The position of the skeleton was three-quarters ventral. The arms were akimbo, the hands in front of the pelvis. The person had fallen, with head toward a wall, on top of a filled-up storage or refuse pit. Skeleton b X21, infans I, was close to No. b X20. The child too had apparently suffered a violent death. The right arm was flexed, the hand in front of the face. Skeletons b X18 and b X19, both infans I, were found in a mass of *kerpich*. They may have been killed when the walls and roof fell, or perhaps they were killed with the other two persons and later covered by the falling house débris. Both skeletons were lying on the right side with arms and legs flexed. Skeleton b X18 had two ear pendants (b 1433) of copper or bronze.

[1] See also *OIC* No. 11, Fig. 145.

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VI

STRATUM III

Because Stratum III is still largely covered by the deep layers of Stratum IV and Stratum V, our information about its inhabitants is scanty.

The life of the Period III people, as told by their material remains, was much the same as that of Period I. There are two very distinct culture features: pottery with painted ornamentation and the totally different spindle whorl type (our main clues in separating the two periods); but the bulk of the material cultures of Stratum I and Stratum III seems to be the same. Neither the architectural remains uncovered, nor the objects of metal, stone, and bone, could be used as chronological criteria for distinguishing the two layers (cf. p. 30, n. 3).

THE SETTLEMENT

Period I had left a thick culture deposit (9 meters at the highest point) on Mounds A, B, C, and D and a thinner layer over a large part of the mound terrace. After Period I, 9 more meters had been deposited on Mound A. The Period III town (Fig. 249) probably ascended in terrace fashion from the base to the top of Mound A and covered the tops of Mound A and its promontories, Mounds B, C, and D. Here we struck thick refuse deposits of Period III, while in the terrace we found only scattered remains of this stratum. To the east and south the settlement of Period II, situated considerably lower as a whole, was in part superimposed on the remaining section of Stratum I (cf. p. 80).

The areas in which the thickness of Stratum III was determined were Plots L 14–15 and Plots J–K 13–14 (29 and 44 of 1927; cf. Fig. 377) on Mound A; Plot T 13 (XXIX of 1927) at the eastern base of Mound A; and Plot F 14 on Mound B. The top refuse of Stratum III was struck in other sections, and Period III remains were observed wherever the excavation was carried down to the base of the Alişar IV citadel wall (cf. p. 192). In several spots the situation suggested that the lowest foundations of the Alişar IV citadel had actually been built during Period III.

Our excavation indicated that the average thickness of Stratum III is about 3 meters. This means that Stratum II and Stratum III are about equally thick, though we estimate the duration of Period III as longer than that of Period II.[1] There are two possible explanations for this condition. Perhaps we have overestimated the duration of Period III—there may be a transitional layer between Alişar III and the period of the Hittite Empire; or perhaps the Period II deposit accumulated more rapidly because of a denser population and a more extensive culture complex such as larger buildings, more building activity, more culture goods, trading refuse, and the like. The archeological evidence seems to support the latter theory.

We ascribe Levels 5 and 6, with their sublevels, to Stratum III. Not until the third working-season did we succeed in determining the relations of Level 6, a thin layer intermediate between Stratum I and Stratum III. Its contents show a mixture of objects of each period,[2] and stone, bone, and metal objects common to both. We could have attributed Level 6 of Plots L 14–15, and similarly Rooms 1 and 2 of Plots J–K 14 (44 of 1927), to either Stratum I or Stratum III, had it not been for the distinct type of pottery associated with this level.

[1] [See p. viii, n. 1.—Editor.]

[2] A fragmentary bowl typical of Period II was likewise definitely associated with this level.

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This type of pottery was first found *in situ* in the intermediate layer in Room 1 of Plots 29 and 44 (J–K 13–14) in 1927, associated with an ore ladle stained by copper oxide.[1] In 1929 Cup b 181 (cf. p. 194) and numerous sherds were found in Level 6 of Plots L 14–15. Since this ware is more closely related to the pottery of Stratum III than it is to that of Stratum I, we call Level 6 "early Period III." The pottery itself is described on pages 194–95.

Unfortunately the sectioning of the top of Mound A could not be finished. But in Plot L 14, outside the citadel wall,[2] a test square was carried down through Stratum III. The only architectural remains uncovered were a few walls in Level 6. Above this there was only a thick layer of refuse, which probably adjoins the buildings still concealed below the Alişar IV remains. In this refuse layer we obtained a number of instructive Period III specimens.

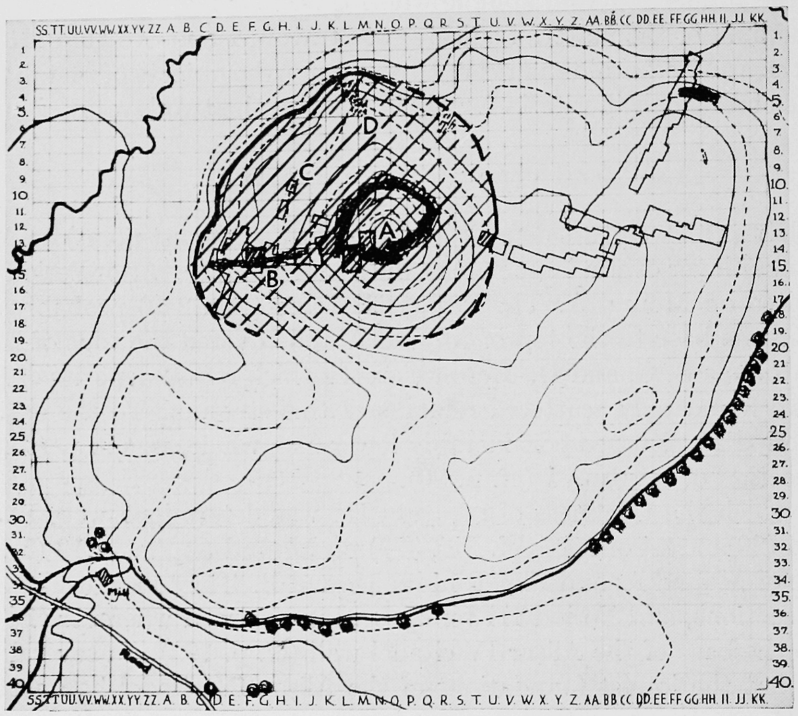

Fig. 249.—Settlement Plan of Alişar III

ARCHITECTURE

Scarcely any structural remains have been uncovered in Stratum III.

In Plot L 14 (Figs. 250–51) we struck the floor of Level 6 at 3 meters below the top of the Period IV citadel wall (cf. Fig. 30).[3] The intermediate culture deposit here was exceedingly dark, showing the presence of a great quantity of ashes and charcoal. The architectural remains of Level 6 are peripheral buildings of the still unexcavated main settlement of Period III. The southern end of the west wall of the citadel, sloping downhill, was directly superimposed on Wall *a* of Level 6 (cf. citadel plan, Fig. 277). The latter was low and built of irregularly piled rocks. Wall *b* was built in the same crude style, and Walls *g* and *h* were little better.

There were four stone-lined pits (*c*, *d*, *e*, and *m*). The circular Pit *c* was made of small stones,

[1] See *OIP* VI 97.

[2] We hope to obtain accurate information about the Alişar IV citadel in its entirety; hence we shall not penetrate inside the fortress to the lower stratum until the upper layer is entirely uncovered.

[3] Cf. also *OIP* VI 114.

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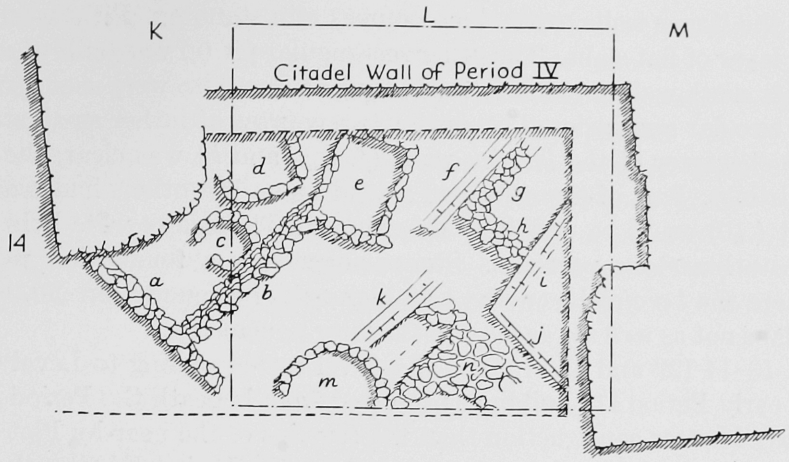

FIG. 250.—PLAN OF LEVEL 6 IN PLOTS K–L 14. SCALE, 1:200

FIG. 251.—PLOTS K–L 14 SEEN FROM ABOVE FROM THE NORTHEAST

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better set than the larger walls, with three courses still standing. Pit *d* was rectangular and inclosed by one layer of flat slabs. The other rectangular pit (*e*) was built of small stones with four courses of its south wall remaining. Some larger stones also were used. Pit *m*, only partly excavated, was circular and inclosed by one or two courses of rather small stones.

Although the character of the *kerpich* walls (*f*, *i*, *j*, and *k*) was clear, the contours of the bricks were indistinct. Part of them formed a solid mass, but others had crumbled and split. Only the height (.10) could be definitely determined. The bricks were light brown or gray-brown with white limestone particles. Stones suggesting a foundation were found below Wall *j* only. Here the *kerpich* layer was 1.40 high and the foundation .30. Pavement *n* was made of large slabs not as well set as most of the later pavements.

In Plots J–K 13–14 (29 and 44 of 1927) in a level corresponding to Level 6 of Plots L 14–15, a section of early Period III buildings projected from beneath the Period IV citadel wall.[1] They seem to be of better construction than the remains of the near-by Plot L 14 would lead us to expect. In the remaining plots excavated along the Period IV citadel wall the pottery gave the only clue that at certain points Stratum III had been reached (cf. pp. 220, 230–31, and 235). No large series of objects and no building sections were uncovered.

In Plot F 14 on Mound B Stratum III was penetrated to the top of Stratum I.[2] The architectural remains here were only a few poor foundation fragments, some *kerpich* walls with no foundations, and some pits.

In Plot T 13 (XXIX of 1927) an interesting retaining wall or facing of an embankment was encountered.[3] It is situated approximately at the border between the territories of the Alişar II and III settlements, and may therefore have more significance than we are able to understand at the present stage of excavation.

POTTERY

All vessels of Period III[4] were handmade. Wheelmade sherds found occasionally in Stratum III are intrusive from Stratum II. The surfaces were apparently smoothed with the polishing-stone, though few fragments were as highly polished as the best red ware of Period I. The decorations are often lustrous.

EARLY ALIŞAR III

Early Alişar III pottery is a distinct group intermediate between Alişar I and Alişar III. The complete vessels found so far are cups of bowllike form; but some of the sherds seem to have belonged to other forms. The surface is usually reddish brown or orange. The decoration is usually made up of straight lines and simple lozenge patterns in brown-red, often a purplish shade.

Cup b 181 (Color Plate V; cf. Plate XVI), found in Plot L 14, Level 6, is typical for most vessels of early Alişar III in form, technique, color, and decoration. The bottom is slightly concave. The light brown paste is medium to fine, with some *kerpich* marks resembling those on pottery of Stratum I. Exterior and interior are smooth and coated with a reddish brown slip. The brownish purple decoration is lustrous. Six groups of four lines each radiate from the bottom up to the band of horizontal lines; a line of the same color covers the lip.

[1] See *OIP* VI 94–97.

[2] In this plot objects of Period VI were directly below the surface. Next came the thick Period V fortress layer. Below this was a thin layer of Period IV remains, and still lower Stratum III.

[3] See *OIP* VI 157, Wall 5.

[4] In the account of "Period III" pottery in *OIP* VI (p. 243) we said: "There is no doubt that this group will be subdivided." The painted pottery which was then called "Period III" can now be divided into Period III (early and main types), Period IV, and Period V. Our present knowledge clears up the perplexing situation described in *OIP* VI 230.

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Cup 3227,[1] found in Room 1 of Plots J–K 14 (Plot 44 of 1927), closely resembles Cup b 181. The missing handle of No. 3227 had been attached in the same manner as that of No. b 181. The brown of the slip is less red than on No. b 181. The design is similar, lacking only the radiating lines on the lower body; the color of the design is less purple.

Cup 782 (Fig. 252) occurred in Plot 29 of 1927, outside the room in which Cup 3227 was found. Its form differs slightly: the bottom is rounder, and the body is more nearly hemispherical. The paste is unusually fine. The colors of the slip and of the decoration are the same as those of Cup 3227—light brown and red-brown; but the design is simpler, composed of series of irregular parallel lines encircling the upper body and radiating from the bottom upward.

Fig. 252.—Early Alişar III Cup No. 782. Actual Size

Cup b 2537 (not illustrated) had interesting associations. It was found in a pit extending below a thin layer of Stratum II in Plots DD–EE 10 (cf. Fig. 93). Its form is identical with that of No. 782, and its surface is light brown. Its decoration, somewhat cruder than that of No. 782, consists of simple red-brown lines irregularly encircling the body and covering the lip and handle. Close to Cup b 2537 in the Stratum II pit lay Pitcher b 2536, clearly of the fine red ware of Period II. But since the form, color, and decoration of Cup b 2537 are almost identical with those of Cup 782, which is definitely associated with the early Alişar III level, we must consider Cup b 2537 as early Alişar III ware, intrusive in Stratum II. If it had been found without these associations, we would have been inclined to attribute it to Period I.

The sherds illustrated in Plate XVII A are mostly from cups like those just described. Sherd b 742:9 seems to be part of a rather large cup. Sherd b 35:2 is a fragment of a jar. The ground colors are shades of brown or orange. The colors of the decoration are dark brown-red and dark and light shades of purplish brown, dull or lustrous. The designs include simple angular patterns and the common lozenges.

[1] See *OIP* VI 262 and Pl. I.

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ALIŞAR III

We have been able to identify the following forms of Alişar III pottery proper: bowl, cup, pitcher, and jar. Some have pointed bottoms.

As in the case of the early Alişar III ware, the vessels were handmade and smoothed with polishing-stones. The surface colors are grayish white, shades of brown (most frequently buff), and red shades. Many of the plain fragments cannot be distinguished from Alişar I vessels.

The type ware has painted decoration, usually strictly geometric designs in straight lines. Curvilinear elements, such as semicircles, undulating lines, and scrolls, are less frequent. Life forms are exceedingly rare; only three vessel fragments so decorated have been uncovered (cf. Color Plate V and Plate XXVII). The colors of the decorations are dark brown, gray, or black, with the addition of brown-red or red in the trichrome designs.

Although complete vessels are rare, the great numbers of Alişar III sherds are easily identified "guide fossils."

Decorated

A polychrome bowl, No. b 515 (Color Plate V; cf. Plate XVI), was found in Plot F 14 near the bottom of Stratum III. It was inverted and covered Jar b 514 (cf. Fig. 259). The bowl has two crescent-shaped handles, lying close to the upper body, and a flat, somewhat rounded, lip. The body is from .008 to .012 thick; the bottom is .01 thick. The paste is of medium fineness; it is light brown with a light gray core visible at some fractures. The exterior and interior surfaces are coated with a buff slip with light brown and light gray shades. The decoration, applied to the upper body only, is grayish black and brown-red, with a luster frequently encountered on the decorations of Period III ware. The find-spot suggests that trichrome decoration was employed from the beginning of Alişar III proper. This assumption is strengthened by the occurrence of sherds with similar decoration in the bottom refuse of Stratum III in Plots F 14 and L 14–15.

Bowl a 1063:180 (Fig. 253) was found about 1 meter below the base of the Alişar IV citadel wall a little below the find-spot of Cup a 936 (cf. Fig. 254) in Plot L 14. It is of the same general form as Bowl b 515; but it is smaller, deeper in proportion, and seems to have had no handles. About one-half of the vessel is preserved. The body is .01 thick; the bottom is .007 thick. The paste is medium and light brown. The rather irregular surface is covered on both sides with a red slip which bears striations of the polishing tool, probably a stone. A wash of light buff color, applied over the red slip, covers the upper part of the body and the lip. The decoration, applied on this secondary wash, is a series of oblique bands combined with thinner lines. On the lip and on the angle formed by the lower and upper body additional bands encircle the vessel. The entire design is black-brown except for a red stain on most of the oblique units. These stains were painted by simple brush strokes, with no attempt to draw a pattern.

The bowl sherds illustrated in Plates XVII–XIX A show a marked monotony of form, with only slight modifications of the lip treatment and of the degree of inclination of the upper body. Various designs are shown. In only one case (b 745:16 in Plate XVIII) is the decoration continued on the lower body (cf. cup decoration, p. 197). Most of the designs employ straight lines only. The exceptions are Nos. 764*b* and 844*b* (Plate XVIII) with scrolls and No. b 36:324 (Plate XIX) with undulating lines. It is interesting to note that in Stratum II there was a small bowl fragment of typical Period II ware with a pattern of just such wavy lines.

The bichrome sherds illustrated are colored as follows: Plate XVII B: Sherd b 35:4, gray-brown on light yellowish; b 35:1, black-brown on light brown; b 36:125, dark brown on reddish

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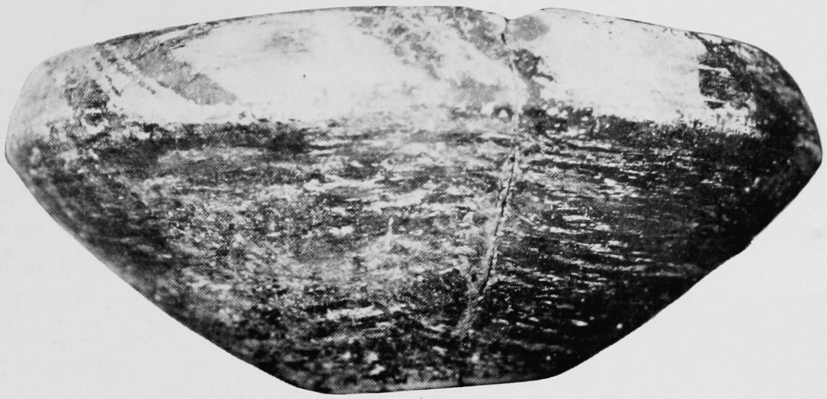
buff; b 36:314, dark brown on grayish white; b 36:141, grayish black on brown-buff; b 36:340, grayish black on grayish white; b 36:330, dark gray on grayish white. Plate XVIII: Sherd

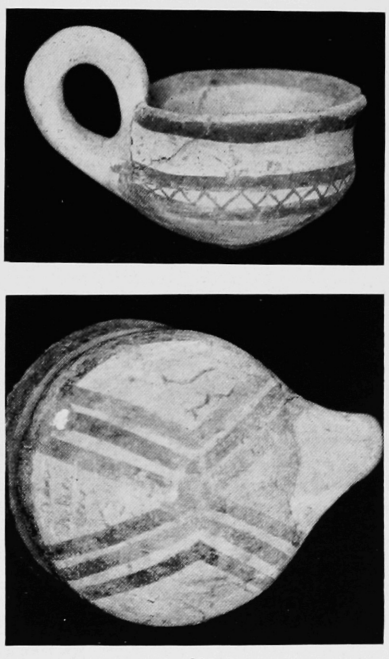


a 1063:180

Fig. 253.—Decorated Bowl Fragment. Scale, 2:3

b 745:16, dark gray on reddish buff (crescent handle broken); b 36:278, grayish black (somewhat lustrous) on reddish buff; 764*a* and *b*, dark brown on buff; 844*a* and *b*, black-brown on buff; 385, dark brown on buff; 1920 (found in Stratum II), black-brown on reddish buff; b 36:162, dark gray on light brown; b 35:13, purplish brown (resembling early Alişar III) on brown-red.

Trichrome patterns on bowl fragments are fairly frequent (Plate XIX A). Sherd b 36:324 was associated with the pit level of Plot F 14 (cf. p. 194). Its slip is light gray; the design, grayish black and brown-red. No. b 36:312 was found a little above the pits in Plot F 14; its slip is light buff, its design grayish black and brown-red. No. 294 was near the top of Stratum III in Plot 14 of 1927 (D 14–15). Its slip is buff, the design dark brown and red. Sherd Y has a light buff slip and a grayish black and brown-red pattern. Compare trichrome sherds from jars, illustrated in Plates XXV and XXVII.



a 936

Fig. 254.—Decorated Cup. Side and Bottom Views. Scale, about 1:2

A trichrome cup, No. a 936 (Fig. 254), was found .20 below the base of Wall 13*b* of the Alişar IV citadel. The cup is .50 high, not counting the handle, which rises above the lip. The lower body is an inverted convex cone (cf. Pitcher b 489, Fig. 256). The upper body is slightly contracted and diverges again at the rim, which protrudes at the point opposite the handle. The exterior and interior surfaces are rather smooth, with a buff slip. The decoration is dull dark brown, turning grayish black in places, and brown-red. The design is simple. The lip is covered by a band overlapping on both sides. Four parallel dashes extend on the interior from the band inside the lip halfway to the bottom. The two lines in the middle are brown-red. The bottom of the exterior is decorated by two groups of three parallel lines each, the central one being brown-red. The handle is plain. The find-spot of the cup was near the top of Stratum III. A comparison with

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Bowl b 515, found low in Stratum III, indicates that polychrome decoration was employed during all of Period III after the transitional phase of early Alişar III.

Cup b 17 (cf. Plate XVI), found in the same plot and level as Cup a 936, is almost identical with it in form. There is no slip on the light brown interior. The decoration consists of a rim band, a pattern at the point of greatest diameter, and a bottom design. The body pattern is a series of scrolls, alternately dark gray and brown-red, bordered above and below by lines and bands. The bottom pattern, badly abraded, shows two(?) groups of three oblique dashes; the central dash is brown-red.

The designs shown on the cup sherds in Plate XIX B differ somewhat from those illustrated above, but the general arrangement is the same. All handle fragments show an identical form.

No. a 551 (Fig. 255) is a neck with a broad bill-spout closely resembling the spout of the Period II jug No. b 2738 (cf. Fig. 135). The decoration is lustrous black-brown and red-brown on a buff slip. The design suggests a bird's head, with the three concentric semicircles representing

a 551

Fig. 255.—Neck of a Decorated Pitcher. Scale, about 2:3

b 489

Fig. 256.—Small Decorated Pitcher. Scale, 1:2

the eye. The middle eye line and the dots filling the triangles of the zigzag line at the neck are red-brown, while the rest of the design is painted with the darker color.

Pitcher b 489 (Fig. 256; cf. Plate XVI) occurred about 1 meter above the level of Nos. b 514 and b 515 in Plot F 14. Its conoid body has a pointed bottom. The neck is disproportionately wide and high. The slip is red-brown. It was originally coated with a light grayish white wash. Only traces of this wash and of the grayish black decoration are preserved.

Jar a 1072 (Figs. 257–58) was found in Plot L 14, 1.90 below the base of the Alişar IV citadel wall. It seems to have been buried intentionally in the dark gray refuse outside the structures assumed to exist below Stratum IV. There were no architectural remains in the find-level. This exceptionally well preserved jar is .376 high. The bottom is about .095 in diameter, the body .352, and the rim .215. The body is from .015 to .017 thick; the neck is from .012 to .013 thick. The form of the body is irregular oval, almost pear-shaped from certain angles. The small, somewhat convex bottom hardly supports the vessel; it must have stood in a depression or in a pot stand. The short neck is separated from the shoulder by a low offset and diverges

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toward the mouth. The handles have nearly circular cross-sections. One handle is somewhat higher than the other. The paste of the jar is medium and light brown. Most of the exterior surface is smooth. A polishing tool left fine striations on the neck and on parts of the body. The bottom and the lower body are rough. The exterior is light brown with reddish brown or buff patches. The interior is light brown.

a 1072

FIG. 257.—DECORATED JAR. TOP, SIDE, AND HANDLE VIEWS. SCALE, 1:5

The color of the decoration is dull dark brown, almost grayish black in places. The color appears to have sunk deep into the surface, a phenomenon frequently noticed with regard to dull decorations on vessels of this period. The lip is coated with a band overlapping on the exterior and interior rim. The design, covering the shoulder and most of the body, consists of two identical sections separated by handles. The handles are unpainted, but the spaces above them are filled with a pattern connecting the main panels. Although the decoration is pleasing and well arranged, technically it is not well executed. The lines are neither straight nor exactly

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parallel. They often flow into one another, they are of unequal length at the ends, or they overlap at the corners.

The trichrome jar No. b 514 (Fig. 259; cf. Plate XVI) was found in Plot F 14 (cf. Bowl b 515, p. 196). The jar is .216 high. It resembles Jar a 1072 in form and in certain features of its decoration. The body is more biconoid, and there is a definite standing base; but the neck, the type and arrangement of the handles, and even the offset at the shoulder, are the same. The paste is somewhat coarser and reddish near the surfaces. There are even some depressions suggesting the *kerpich* marks of Period I ware. The surface is lighter than that of No. a 1072. There

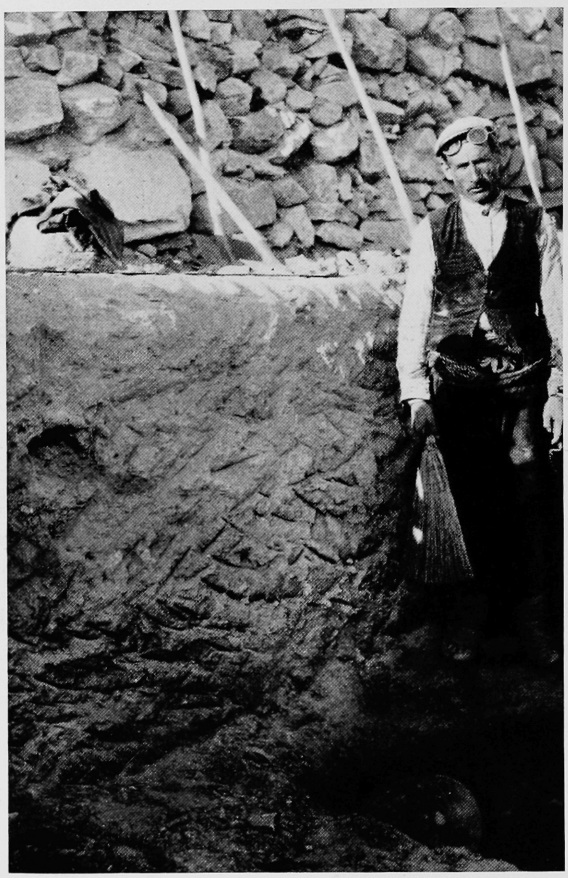

FIG. 258.—FIND-SPOT OF JAR a 1072 BELOW WALL 13*b* OF THE ALIŞAR IV CITADEL

seems to be a definite buff-colored slip with light brown and light gray shades on the exterior and on the interior of the neck. The rest of the interior is light brownish buff. The grouping of the design is very similar to the decoration of Jar a 1072; but here only the upper band is continuous, and the space above each handle is blank. In the body design there are two groups of three parallel lines on each side of the vessel. The central line in each group is brown-red, while the rest of the decoration is grayish black.

The jar sherds (Plates XX–XXVII) nearly all seem to be from vessels shaped like Nos. a 1072 and b 514. As a rule the designs show the same elements which occur on the bowl fragments illustrated above: strictly geometrical figures composed of straight thin lines (Plate XX) or of uniformly broad bands (Plate XXI). Broad bands bordering series of thin lines (Plates XXII–XXIII) and patterns with alternating solid and blank lozenges or squares (Plates XXIII–XXIV) occur frequently. Curvilinear patterns are exceptional (Plates XXVI–

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XXVII A). They are confined to some semicircles, undulating lines, and the typical Period III scrolls. An odd scroll pattern is painted on the exterior surface around the perforation in Sherd b 36:325 (Plate XXVI), which may be a pot bottom or a lid.

The only life forms which we have found on Alişar III pottery are on Sherds b 419*a*, b 419*b*, and 72. Nos. b 419*a* and *b*, belonging to the same vessel, were found near the top of Stratum III in Plot F 14. The vessel surface has a buff slip. On Sherd b 419*a* a conventionalized warrior with odd headdress or hairdress is pictured (Color Plate V). He holds a lance upright in his right hand, while his left hand touches or grasps a problematical object painted brown-red, in contrast to the grayish black color of the rest of the decoration. The design fragment at the left side of the sherd suggests the front of a horse. Above the warrior the leg of a second person is visible.

The second fragment, No. b 419*b* (Plate XXVII B), shows parts of two other warriors holding lances with long, broad points. Above the person to the left is a series of radiating lines suggesting a sun symbol. In the upper right corner part of a brown-red object is represented.

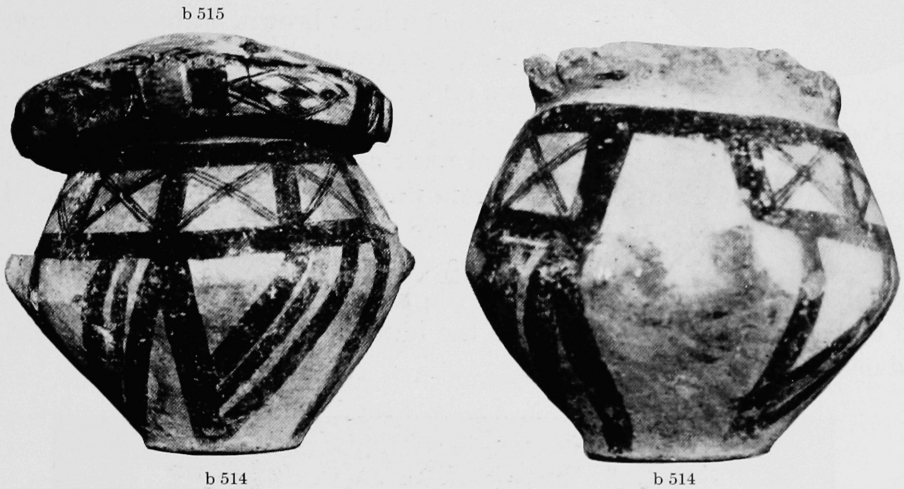

Fig. 259.—Jar and Bowl Found Together, with Another View of Jar after Removal of Bowl. Scale 1:4

Sherd 72 (Plate XXVII B) was found in the top refuse of Stratum III mixed with Alişar IV and V remains in Plot E 15 (Plot 4 of 1927). It also represents part of a conventionalized warrior painted in red-brown and red on a buff surface. The lifted right arm may hold a lance, the shaft of which is visible at the left edge of the sherd. The left hand holds a curved sword. The checkerboard pattern on the upper body suggests armor; the dashes above may be part of a beard.

The color combinations of the jar sherds are the same as those of bowl sherds; the designs are usually painted in gray to grayish black or dark brown on surfaces ranging from reddish buff to grayish white. The trichromic designs (Plates XXV, XXVII), like those of the bowl sherds, show that the third color, red or brown-red, is frequently employed simply as a fill color; but in some cases (e.g., the life forms, Color Plate V, Plate XXVII) it forms independent design elements. The fact that we have found many more two-color sherds than trichrome fragments may be because the third color was used sparingly (e.g., b 514, Fig. 259). Perhaps trichrome decorations were as frequent as two-color designs. There occur also accidental discolorations, perhaps due to fire. The colors of Sherd b 36:303 (Plate XXVI) may have changed in this manner. Its decoration is now a poor dark brown-red and brown on a grayish white surface with a bluish tint.

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Two pottery disks (797 and 1784, Plate XXVII) were ground to their present form from jar sherds in such a manner that the design fragments still have a pleasing effect. Such disks may have been used as lids for narrow-mouthed jars. In all layers of this mound, as well as in other parts of the world, pottery disks made of the wares of the periods and localities occur. Usually they are perforated through the center.

Plain

There is no doubt that our information about Alişar III plain ware is incomplete. Many undecorated brown or reddish sherds occurring in Stratum III cannot be distinguished from the pottery of Stratum I. However, the better red ware of Alişar I is very rare in Stratum III.

a 1057

Fig. 260.—Plain Bowl. Scale, 1:3

Bowl a 1057 (Fig. 260) was found in Section 17 of the Alişar IV citadel (cf. p. 231), flush with the inner base of the citadel wall. The bowl is shallow, with flat, somewhat convex bottom and contracted rim. The paste is medium and light brown. Patches of a red slip appear on the upper exterior, while the light brown base color shows on the interior and on the bottom. A large part of the surface is blackened by fire. The vessel has the general form and surface treatment of Alişar I ware; even the paste could not be distinguished from that of certain earlier vessels. However, the decorated sherds associated with its find-spot are Alişar III.

The second fairly complete plain vessel is a very small pitcher (No. b 328, Plate XVI) of crude, irregular make. The body is oblong with oval cross-section as seen from the top. One handle had extended from the shoulder to the lower body. The surface is light brown; the bottom and one side are fire-blackened.

Fig. 261. "Horned Altars." Scale, about 1:12

Some rather problematical objects of crude, brittle earthenware (Fig. 261), partly fire-blackened, found in the Alişar III refuse in Plot L 14, may represent "horned altars." They resemble the "horns of consecration," associated in Crete and the Aegean[1] and apparently in Egypt from prehistoric times on with the cult of the "God of the Double Ax."[2]

An oval loom weight (a 893) was found in a refuse layer in L 14. It is of gray clay, about .06 long (cf. p. 257).

SUMMARY

A comparison of Bowl b 515 with the Alişar I bowls Nos. b 379*a* and b 135 shows close resemblance as to form and handle arrangement, indicating that the Alişar III bowl type is a deriva-

[1] A. Evans, *The Mycenaean Tree and Pillar Cult and Its Mediterranean Relations* (New York, 1901).

[2] On the "God of the Double Ax" see P. E. Newberry, "Two Cults of the Old Kingdom," *LAAA* I (1908) 24–29, and "An Unpublished Monument of a . . . . 'Priest of the Double Axe,' " *ASAE* XXVIII (1928) 138–40.

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tive from the earlier form. The upper body, red-coated in Period I, was decorated during the later period. Furthermore, the plain Alişar III bowl No. a 1057 is almost identical in form with the typical Alişar I bowl No. b 616. The form of the early Alişar III cups (b 181 and others) is closely related to the form of No. b 455 from Stratum I. It may have been the influence of the Alişar II pottery, however, which caused the cups of the Alişar III main type to become pointed.

Though up to this time the typical Stratum I chalice has not appeared in Stratum III, most of the Stratum I forms persisted during Period III. Stratum I plain ware, with occasional fluted and incised ornamentation and sporadic attempts at painted decoration, gave way to the extremely frequent and distinct decoration of the Alişar III vessels.[1]

A description of pottery spindle whorls follows. A fragment of a pottery figurine is described on page 206.

SPINDLE WHORLS

The break between Alişar I and Alişar III is emphasized by the spindle whorls as much as by the pottery. The Alişar III whorls differ radically from those of Alişar I. The stone whorls so frequent during the first period disappear almost entirely.

The typical Alişar III whorl, either plain or ornamented, is a cone or conoid of well baked pottery with concave base and a perforation through the apex. The colors show gray, brown, and red-brown shades. The surface is often smooth, even polished.

ORNAMENTED POTTERY

The Alişar III ornamented whorls, like those of Alişar I, have parallels at Troy.[2] The ornamentation, consisting of stippling and incised lines, is always on the margin of the concave side, suggesting that it was uppermost during use.

The patterns shown in Figure 262 are as follows: No. b 1225, two concentric bands filled with rotating dashes and angles, the concave part polished; No. b 2673, curved lines and two angles on a polished surface; No. b 2468, curved and angular lines, some stipples; No. b 1101, four series of curved lines; No. b 459, star with six points; No. b 1995, rotating dashes; No. b 1815, five series of paired lines forming a star with five points; No. b 2460, irregularly distributed stipples; No. b 2552, four paired angles separated by four bands which are filled with a stippled decoration; No. b 1171, four stippled semicircles separated by series of three dashes, traces of white incrustation.

Though all of these whorls, except Nos. b 459 and b 2673, were found in Stratum II, comparison with specimens (Fig. 263) found in Stratum III of Plot L 14 shows their identity in form and ornamentation. The following patterns are found in the second group: No. a 926, paired curves and rotating dashes; No. a 1121, paired angular incisions; No. a 999, faint paired zigzag pattern; No. a 900, series of unconnected angular elements; No. a 966, four series of curved lines forming an irregular rectangle; No. a 1004, paired angles and rotating strokes. The paste is fine, the surface well polished.

Six ornamented pottery whorls (Fig. 264) typical of Alişar I were found in Stratum III. Four of these were associated with Level 6 (early Period III), and two (Nos. a 433 and a 901)

[1] Readers who wish to compare the painted pottery of Alişar III with that found at other sites are referred to H. Frankfort, *Studies in Early Pottery of the Near East* I–II; Eduard Meyer, *Geschichte des Altertums* I. Bd., 2. Hälfte, §502; Ernst Herzfeld in *Archaeologische Mitteilungen aus Iran* I (1929) and *London Illustrated News* (1929), May 25, June 1 and 8; Henri de Genouillac, *Céramique cappadocienne;* L. Curtius in H. Grothe, *Meine Vorderasien-Expedition*, p. 278; John L. Myres, "The Early Pot-Fabrics of Asia Minor," *Journal of the Anthropological Institute of Great Britain and Ireland* XXXIII.

[2] W. Dörpfeld, *Troja und Ilion*, pp. 424 ff. and illustrations.

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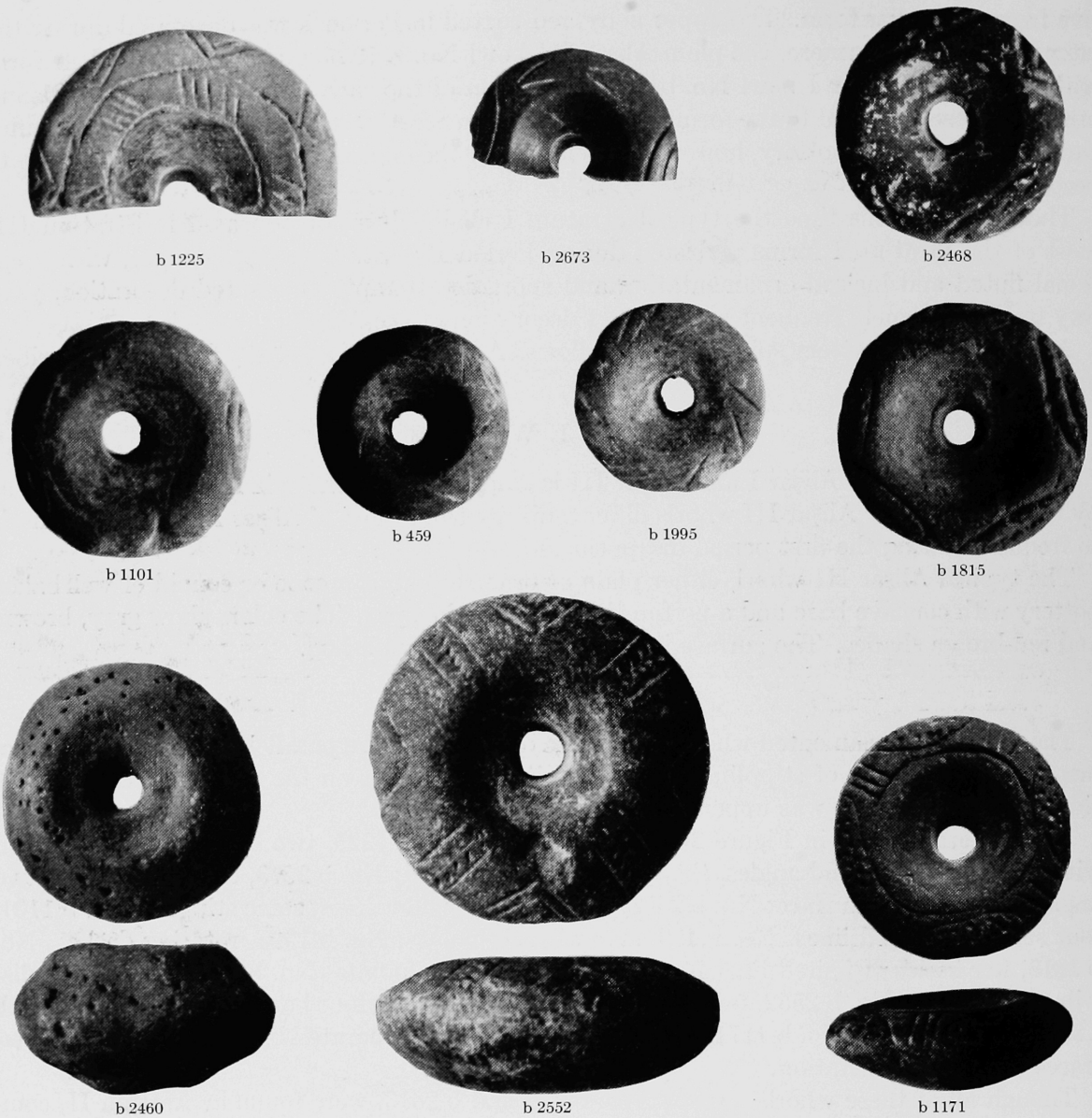

Fig. 262.—Ornamented Pottery Whorls. Actual Size

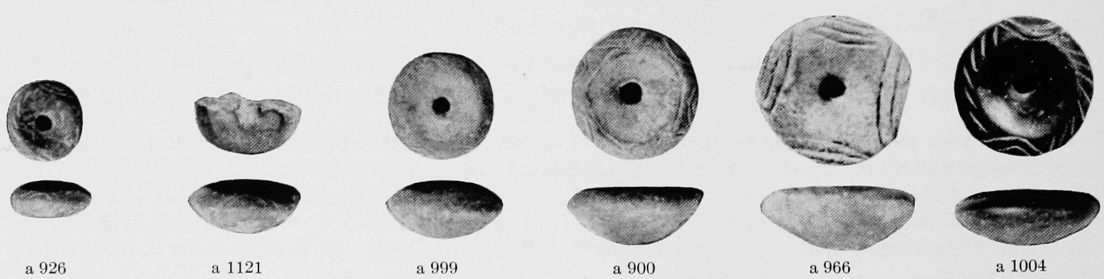

Fig. 263.—Ornamented Pottery Whorls from Mound A. Scale, about 1:2

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were found in definite Alişar III refuse. All may have been intrusive. Three series of dotted semicircles are drawn on both faces (a 1160, a 433, and a 1024) or on one face (a 901 and a 1025). No. a 1032 is ornamented with three series of two dotted concentric circles on the side.

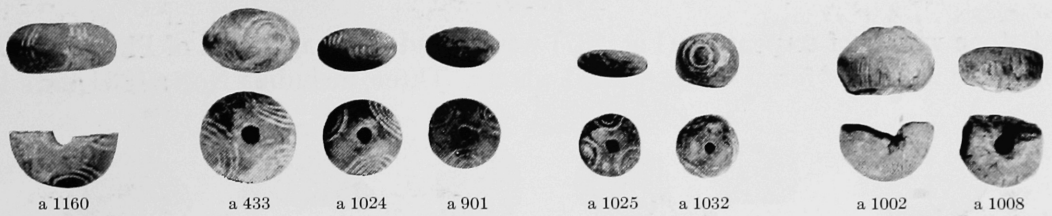

FIG. 264.—POTTERY WHORLS OF ALIŞAR I TYPE AND POTTERY WHORLS WITH UNUSUAL DECORATION. SCALE, 1:2

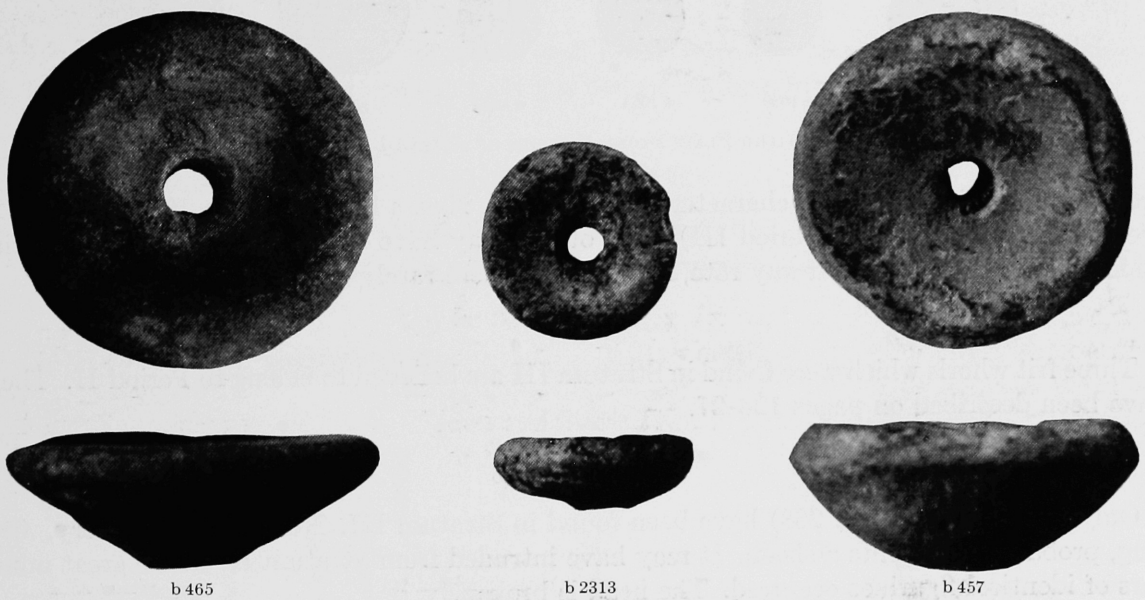

FIG. 265.—PLAIN POTTERY WHORLS. ACTUAL SIZE

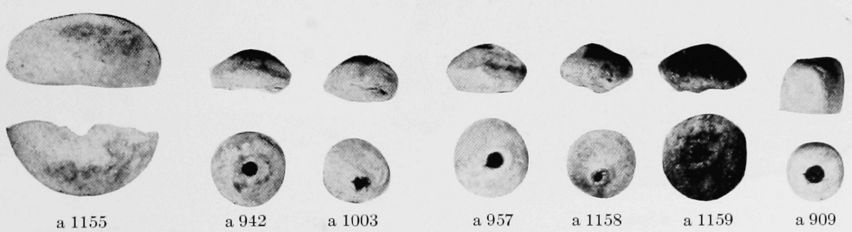

FIG. 266.—PLAIN POTTERY WHORLS. SCALE, ABOUT 1:2

Two unusual whorls with simple incised dashes (a 1002 and a 1008 in Fig. 264) occurred in early Period III (Level 6 of Plot L 14). Their forms are biconoid and discoid.

PLAIN POTTERY

Of the typical Alişar III plain pottery whorls (Fig. 265) No. b 2313 was associated with Stratum II, whereas the rest were found in the stratum of their origin.

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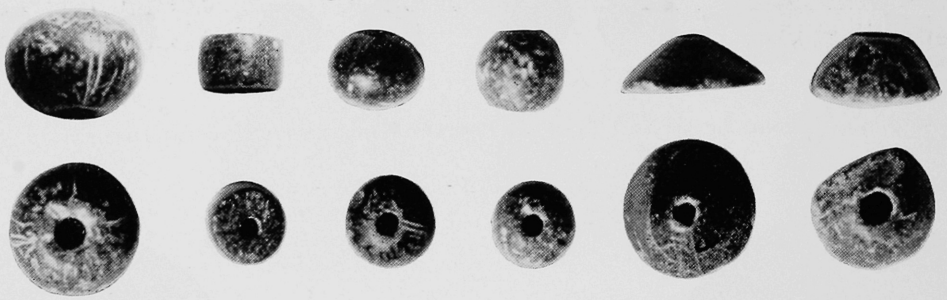
Others (Fig. 266), except for the large semiglobe No. a 1155, which is apparently of Alişar IV origin, might have been found in any layer of the mound. There are conoid (a 942 and a 1003), biconoid (a 957, a 1158, and a 1159), and tubular (a 909) forms.

STONE

Eight stone whorls of serpentine (Fig. 267) were found in Stratum III of Plot L 14. They show the same variety of forms as the Alişar I whorls. Three, including Nos. a 1034 and a 1037,



a 1037 a 1000 a 1034 a 1033 a 892 a 898

Fig. 267.—Ornamented and Plain Stone Whorls of Alişar I Type. Scale, about 1:2

are ornamented in the manner characteristic of Alişar I. Nos. a 1000, a 1033, a 1034, and a 1037 occurred in Level 6 (early Period III). The others may have accidentally intruded into the main Alişar III stratum. At any rate, stone whorls were rarely used during Period III.

FRIT

Three frit whorls which were found in Stratum III are believed to belong to Period II. They have been described on pages 126–27.

FIGURINES

Only two figurines (Fig. 268) have been found in Stratum III. No. a 953, of pottery, .018 long, probably represents a sheep. It may have intruded from Stratum II, where great numbers of identical figurines occurred. The head is broken.

a 894 a 953

Fig. 268.—Figurines. Actual Size

No. a 894, of serpentine (.065 long, .03 high, and .006 thick), shows typical Alişar I workmanship (cf. pp. 53 f.). This also may represent a sheep. Wool is suggested by the typical incised markings on the back. The eyes are indicated by a perforation through the head. Two more holes are at the spots where the legs should be. It may be that this Period I type of stone figurine persisted during Period III. The present specimen cannot be distinguished from those associated with Stratum I.

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SEALS

Two stamp seals (Fig. 269) were found in Stratum III. No. a 1028 is of black serpentine with an almost square base, .0065 thick, and a small knob handle.

FIG. 269.—STAMP SEALS OF SERPENTINE. ACTUAL SIZE

No. b 14, of dark gray serpentine, is a roughly shaped disk without a handle. Perhaps the groove encircling it was for suspension.

An ivory object (a 430), perhaps a stamp seal, in the form of a shoe, was found in Stratum III, but is probably a Period II product. It has been described on page 148.

METAL OBJECTS

The collection of metal objects from Stratum III is small, undoubtedly because only a small section of this culture layer has been excavated. The series includes copper or bronze objects and lead rings (Figs. 270–71).

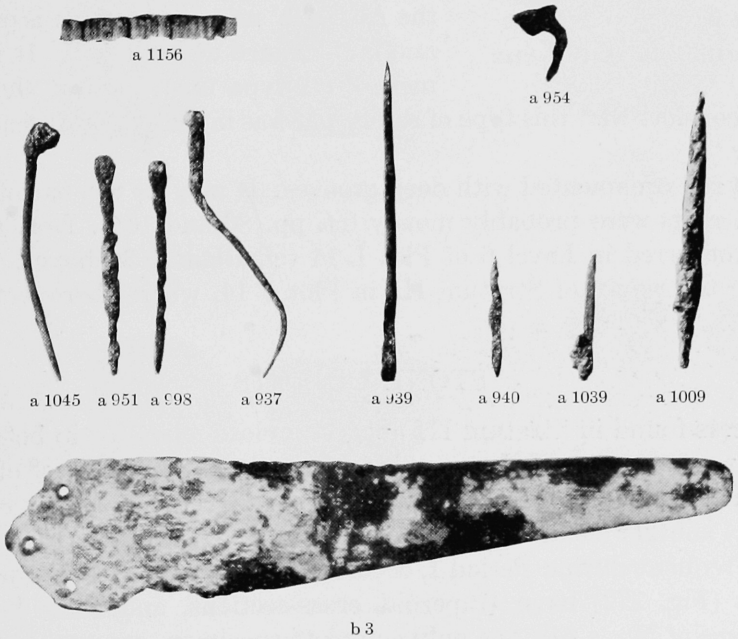

FIG. 270.—METAL OBJECTS. SCALE, ABOUT 1:2

A fibula and a spearhead are the only objects which might be called characteristic of Stratum III. The lead rings, the blade, and the needle are Alişar II types. The pins might have been found in Stratum I, Stratum II, or Stratum IV. The miscellaneous objects are not typical of any period.

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Two spindle-shaped points are illustrated. Both have rectangular cross-sections. No. a 1039 was found in Level 6 of Plot L 14. It may have been part of a spearhead. No. a 940 was associated with the main section of Stratum III. It may have been used as an arrowhead.

Spearhead a 1009 was associated with early Alişar III in Level 6 of Plot L 14. The tang is separated by an offset.

Blade b 3 is identical with the Alişar II blades in Figures 193–94. It was in Level 6 (early Alişar III), associated with a broken Alişar II bowl. There is no doubt about the Period II origin of this well wrought double-edged blade. It has the blunt point of the Alişar II specimens, qualifying it as a knife rather than a dagger. The cross-section is diamond-shaped, .003 at the thickest point. Three perforations held the rivets, and the handle extended apparently about half the length of the blade.

Needle a 939 was found in Plot L 14. Either it is a trade piece from Stratum II or it represents an adopted culture feature. The former explanation seems more plausible.

No. a 954 may have been part of an ear pendant (about .014 in diameter). Earring b 1226 accompanied burial b X16 (cf. p. 212).

No. b 463 is perhaps a fragment of a pin head.

Pins a 951 and a 937 occurred deep in the Alişar III deposit of Plot L 14. Nos. a 1045 and a 998 were associated with the early Alişar III remains of Level 6. Nos. a 951 (.0685 long), a 998 (.066 long), and a 937 (.084 long) have globular heads, as far as the oxide permits us to judge them. No. a 1045 (.081 long) has a coiled head.

b 463 b 462 b 390

FIG. 271.—METAL OBJECTS. ACTUAL SIZE

Fibula b 462 occurred in Plot F 14 sufficiently deep to minimize the possibility that it had intruded from the Alişar IV refuse on top. It is oval in cross-section and is thickened at both ends. It is the oldest specimen of its type uncovered at the mound. For the present we may consider that this type of safety pin was invented, or at least adopted, by the Alişar III people.

No. a 1156 is a rod ornamented with deep grooves. It may be the bar of a fibula.

The three lead rings were probably money (cf. pp. 80 and 165). Nos. a 1011 and a 1026 (not illustrated) occurred in Level 6 of Plot L 14 (cf. Blade b 3 above). No. b 390 was associated with the top refuse of Stratum III in Plot F 14, where there were some Period IV sherds also.

STONE OBJECTS

The stone objects found in Stratum III suggest a close relationship between Period I and Period III stone work. Stratum III stone objects are identical with those of Stratum I, except that the Period III type of whetstone is not found in Stratum I. However, it is frequent in Period II. This is another small link between the Alişar III and Alişar II settlements.

Flake knives, frequent during Period I, occurred in all levels of Stratum III. The chalcedony flake knives (Fig. 272) have trapezoid cross-sections, and their lateral edges are retouched. The edges of No. a 943, the only complete specimen, are serrated in a uniform way suggesting its use as a saw. Nos. a 1005 and a 1010 were found in Level 6 of Plot L 14 (early Alişar III); No. b 2620 occurred in the refuse between Stratum III and Stratum IV.

The obsidian flakes Nos. a 1013, a 962, and a 910 (Fig. 272) seem to be less regularly retouched than the chalcedony specimens, perhaps because of the material. No. a 1013 was found in Level 6 of Plot L 14.

Hammer ax No. a 1006 (Fig. 273), found at the bottom of Stratum III (Level 6 of Plot L 14), is of black steatite with a cylindrical perforation. No. b 376 occurred in the top refuse of the

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stratum. It is of dark gray diorite(?). Though it has the shape of a hammer ax, its curved "cutting edge" suggests use as a mace head rather than as an ax or a hammer.

Celts a 911 and a 946 (Fig. 272) are of highly polished dark green and grayish green serpentine. The former has an abruptly tapering cutting edge. No. a 1035, associated with early Alişar III refuse, may be a fragment of a celt with perforated head.

FIG. 272.—STONE OBJECTS. SCALE, 2:3

FIG. 273.—STONE OBJECTS. SCALE, 1:2

Whetstones of the type found in Stratum II persisted throughout Period III and into Period V. Two specimens (Fig. 273), both perforated oblong slabs, were found in Stratum III. No. a 1029, from early Alişar III, is of somewhat granular stone; No. a 958 is of slate.

"Miniature hammers" persisted seemingly from late Alişar I times. No. a 927 (Fig. 272), found in Alişar III refuse below the floor of Section 17 of the Alişar IV citadel, is of serpentine, and is identical with the "miniature hammers" described on pages 67–68.

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Two small polished stones (a 1027 and a 1007 in Fig. 273) were associated with early Alişar III refuse in Level 6 of Plot L 14. Though most frequent in Stratum I, similarly polished stones occurred also as late as Period V.

Stone spindle whorls, a stone figurine, and stone seals have been described.

BONE OBJECTS

The collection of bone objects from Stratum III (Fig. 274), showing a mixture of Alişar I and Alişar II specimens, illustrates the persistence of certain Period I features and the intrusion of small Period II articles.

Objects identical with frequent Alişar II specimens include polished tubes (a 904 and a 1030), an augerlike point (a 537), and a spatulate object (a 593) with perforated handle.

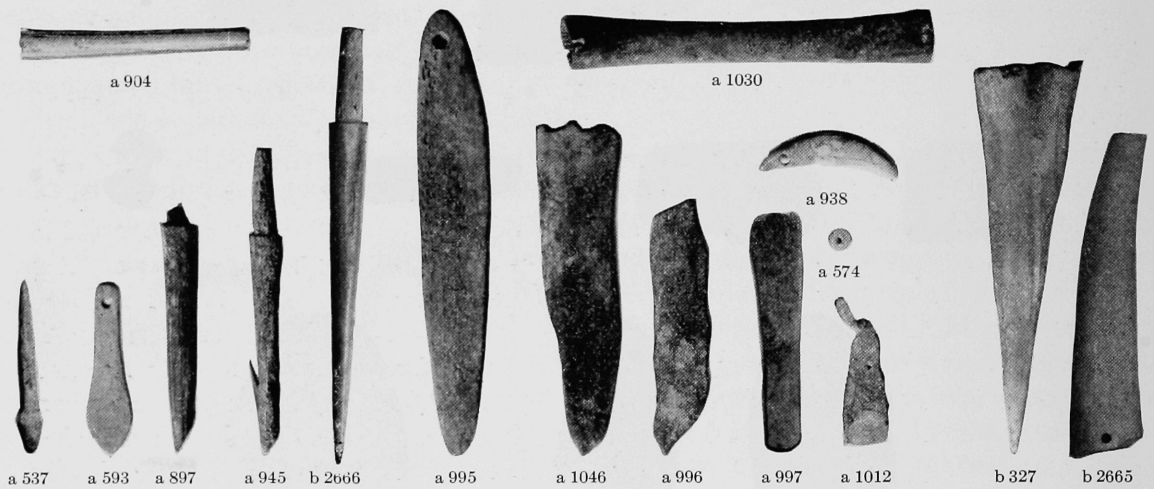

FIG. 274.—BONE OBJECTS. SCALE, 1:2

Among Alişar I types of objects are Spindles(?) a 897, a 945, and b 2666. No. a 945 has three barbs extending from the point upward. Other objects of Alişar I type are spatulate flakes Nos. a 995, a 1046 (with sharp cutting edge), a 996, and a 997. No. 1012 is unusual. It is rather wedge-shaped and may have had a ring at the top.

Awls like No. b 327 occurred most frequently in Stratum I, but they were found in Stratum II and Stratum V also. Awl b 327 was the only one found in Stratum III.

No. b 2665 is a section of horn cut off at both ends and perforated lengthwise. An additional hole is drilled through the base.

Perforated animal incisors such as No. a 938, and beads such as No. a 574, were probably employed as ornaments during all periods.

An ivory object (No. a 430) which was found in Stratum III has been described on page 148.

DISPOSAL OF THE DEAD

Three skeletons were found in Plot S 23, associated with sherds of both Period II and Period III; apparently the plot was in a marginal section between the two settlements. These three burials were in plain earth.

Skeleton b X15 (Fig. 275), that of an adult male, was 2.40 below the surface. The position was dorsal, with the skull toward the southeast. The cranium was pushed forward to the left scapula. All the sutures are very complex. The frontal suture is open all the way down,

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FIG. 275.—SKELETON b X15. GENERAL VIEW AND DETAIL

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although the sagittal has the appearance of closing at the back; two Wormian bones were present on the sagittal suture at its junction with the coronal. The mastoid processes and the supra-orbitals are well developed; the nasal spine projects well (nasal trough was destroyed), and, though the gnathion is well forward, there is still a trace of prognathism. The angle of the ramus is sharp. The teeth are worn; rim development is absent around the upper incisors; and the first upper right molar shows alveolar absorption. The right arm was bent at about a right angle, the hand lying over the ribs. The left arm was extended along the side, the hand being near the left *caput femoris*. Both legs were flexed toward the left side, the feet lying directly below the pelvis. The bones were, on the whole, poorly preserved. All the long bones were cracked; the left side of the skull was fragmentary, the facial bones broken, the maxillary and palate shattered, the mandible broken but complete. There were no mortuary gifts.

Skeleton b X16, that of a child about six years old (infans I), was uncovered at 1.80 below the surface. It lay on the left side, the skull toward west-southwest. The first permanent molar was about to erupt. Both legs were contracted, and the feet lay under the pelvis. The right arm was flexed, crossing the trunk at the first lumbar vertebra, the hand lying on the left ribs. The left arm was flexed to the maximum, and the hand, with extended fingers, lay under the mandible. The mandible was in good condition, although the skull was smashed; all long bones were cracked, and the scapula and pelvis were splintery. A copper or bronze earring (b 1226) was found near the right side of the skull, parts of which had been stained by the metal. No earring was found for the other ear.

Skeleton b X17, that of an adult female(?), was close to b X15 and slightly lower. The position was ventral, the skull lying on the right side and toward the southeast. The left arm was flexed, with the elbow somewhat away from the trunk and the hand lying at the mandible. The right arm was slighty flexed, and the hand rested in front of the pelvis. The legs were flexed toward the left side, the knees reaching about as high as the tenth thoracic vertebra and the feet lying to the left of the pelvis and slightly below it. Most of the long bones were broken, the right side of the cranium was powdered, the maxillary smashed, and the mandible fragmentary. A smooth oval stone was about .04 from the occipital bone. It may have been placed there by accident, or it may have been in the nature of a mortuary gift.

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VII

STRATUM IV

Stratum IV at Alişar has yielded no architecture, sculpture, or cuneiform records which by their similarity to such finds at Boğaz Köy would identify it with the time of the Hittite Empire. Our chief clue is the pottery at Boğaz Köy, as evidenced by the collection of Th. Makridi Bey in the museum at İstanbul, by the specimens we ourselves found in the Hittite capital, and by the valuable publications of De Genouillac,[1] Frankfort,[2] and others. The relative position of Period IV in the series of Alişar settlements confirms its identification with the time of the Hittite Empire, as does the discovery of various objects of foreign manufacture.

A previous publication (*OIP* VI) has given a brief history of the Hittite Empire, some account of the archeological remains of the period in the "Hittite" culture area, and a bibliography.[3]

Even if we had no knowledge of the existence of the great Hittite Empire, the peer of the most powerful nations of its time, we would judge from the expansion of the Alişar IV town (cf. Fig. 276) that a period of great activity and prosperity had arrived. No settlement at this site, either before or after Alişar IV, was as strong and as extensive as the Hittite Empire town. The Alişar V town approached it most closely. There may have been large settlements there during Period VI (mainly Roman); but at that time there were no fortifications, except perhaps a guardhouse on top of Mound A.

The Alişar IV town on the terrace apparently was not fortified. It is possible that traces of a city inclosure may exist somewhere at the mound edge. At those points where the mound margin was tested, no fortifications of this period were uncovered, though the grayish white layer of sterile soil superimposed on the Alişar II stratum along the eastern mound edge (cf. pp. 81 f.) may be the remainder of the dirt foundation of a defense wall. The citadel was presumably the seat of the ruler of a principality with his officials and guards. There may also have been an unidentified cult center, perhaps situated in the small mound where Plot YY 26 was excavated.

Probably the principality fell with the Hittite Empire about 1200 B.C. It appears that the citadel of Alişar was destroyed by a conflagration, after which the site was uninhabited for a long period.

Well built structures of Alişar IV were uncovered in the citadel complex on top of the main mound (A) and in Plot YY 26, where the corner of a presumably important building was struck. But even in the citadel there are many sections of buildings which could not be distinguished from earlier or later architectural remains. This is due to the disappearance of those parts of the buildings which might have shown distinctive features: the upper structures of *kerpich*, the roofs, and the doors and windows. In many cases only the stone foundations are left. So at present we may state only that the people of the Hittite Empire town at Alişar lived in houses of *kerpich* on foundations constructed fundamentally in the same manner as the buildings of the preceding and succeeding periods.

The expansion of the Alişar IV town reflects in miniature the expansion of the Hittite power.

[1] *Céramique cappadocienne*, 2 vols.

[2] *Studies in Early Pottery of the Near East*, 2 vols.

[3] For a compilation of the history of this period, cf. D. G. Hogarth, "The Hittites of Asia Minor," *Cambridge Ancient History* II, chap. xi. See also G. Contenau, *Éléments de bibliographie hittite* (Paris, 1922) and its supplement in *Babyloniaca* X (1927–28) 1–68 and 138–44.

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Many culture features distinguishing Alişar IV are due to foreign influences. There must have been an active group of people in close connection with the outside world. We may assume that the court and the warriors returning from campaigns, as well as the merchants and traders, were stimulating forces which brought about the changes differentiating Alişar IV material culture. But, in spite of the importance of the town, the architecture and certain types of domestic tools indicate that, as always, the mode of living of the common people remained much the same. Indeed, the life of the present-day Anatolian may still be a good illustration, fundamentally, of the life of the Alişar IV commoner.

One of the important events of this period was the development of the use of iron, marking Period IV as the initial phase of the Iron Age in this particular region. It may have been this which made the arms of the Hittites victorious and thus created their empire. Most iron objects uncovered in Stratum IV seem to be parts of weapons. There are some finds suggesting the occurrence of iron objects prior to Alişar IV in other regions;[1] but the other nations of this time were obliged to import the new metal from the Hittites.[2] Iron is mentioned for the first time in the cuneiform records from Boğaz Köy.

Another very important culture feature appearing in Anatolia during this period is the much discussed "Hittite hieroglyphic."[3] We have no proof of the origin of this writing or of its occurrence before the Hittite Empire, but in some places it persisted after the empire's downfall. Examples of "Hittite hieroglyphic" are found from Mount Sipylus near the west coast of Asia Minor as far east as Malatya[4] (Arslan Tepe), and from Hüyük, Boğaz Köy (Nişan Taş), and Yazılı Kaya as far south as Hamath on the Orontes in North Syria.[5] Stelae with incised "Hittite hieroglyphic" inscriptions have been found about 50 kilometers south of Alişar near Çalabverdi,[6] at a place where Alişar IV sherds are frequent on the surface of the ground. At Karga, about 30 kilometers west of Alişar, another such stela was discovered.[7] At Alişar we have found this writing on button-shaped seals only, but the specimens are sufficiently numerous to serve as a starting-point for future investigations.[8]

Most of the Alişar IV pottery was made on the wheel, and the vessels are as a rule finer and more graceful than the handmade pottery of Alişar I and Alişar III. An elaboration of details, such as rims and handles, goes hand in hand with the improved technique. The rigid geometrical Alişar III ornamentation is replaced during Period IV by more varied designs with curvilinear elements, particularly concentric rings and conventionalized horned animal patterns. Most vessel types were utilitarian, though perhaps certain small decorated pots were used for cult purposes such as libation.

Few spindle whorls show a characteristic form, in contrast to the large numbers of typical whorl shapes of Strata I, III, and V. The only characteristic Alişar IV type seems to be a large pottery semiglobe, sometimes decorated with rings on the base. Stone whorls are rare. Oval pottery or clay loom weights contrast in form with the trapezoid shapes of Alişar V.

[1] Cf. H. R. Hall, *The Ancient History of the Near East*, 7th ed. (London, 1927) pp. xx and 73 f.; and J. H. Breasted, *A History of Egypt* (New York, 1912) p. 136.

[2] E. Meyer, *Reich und Kultur der Chetiter* (Berlin, 1914) p. 76.

[3] [See Ignace J. Gelb, "Hittite Hieroglyphs" I (*SAOC* No. 2 [1931]), and Emil O. Forrer, "Die sogenannte hethitische Bilderschrift" (*SAOC* No. 3 [1932]), recounting important progress in decipherment.—EDITOR.]

[4] H. H. von der Osten, "Four Sculptures from Marash," *Metropolitan Museum Studies* II (1929/30) 112–32.

[5] E. Meyer, *op. cit.* pp. 31 f. and 139 f.; cf. also John Garstang, *The Hittite Empire* (London, 1929) chaps. vi–x.

[6] E. Forrer in *MDOG* No. 65, p. 36; *OIC* No. 6, pp. 23–24; *OIP* VI 27.

[7] During the survey made by F. H. Blackburn; see *OIC* No. 6, pp. 139–40.

[8] No cuneiform writing associated with Hittite Empire remains has been found at Alişar, though both cuneiform and hieroglyphic were used at Ḫattushash.

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Several pottery figurines were found in Stratum IV, including vessel handles in the form of animal heads and some reground potsherds resembling animal forms.

The button-shaped seals or "bullae" with "Hittite hieroglyphic" inscriptions have already been mentioned. An Egyptian scarab of 1400–1200 B.C. indicates roughly the date of Stratum IV and shows that objects from Egypt reached the Alişar IV settlement. Scaraboids show Egyptian influence.

Though iron was introduced during this period, the older forms of bronze or copper objects continued to be used in addition to the new types of metal objects. The spindle-shaped arrowhead(?) was supplemented by a socketed head with three-lobed cross-section. The fibula or clasp of definite form appeared for the first time, except for one specimen found in Stratum III (cf. p. 208). Lead ties for the repairing of vessels were introduced.

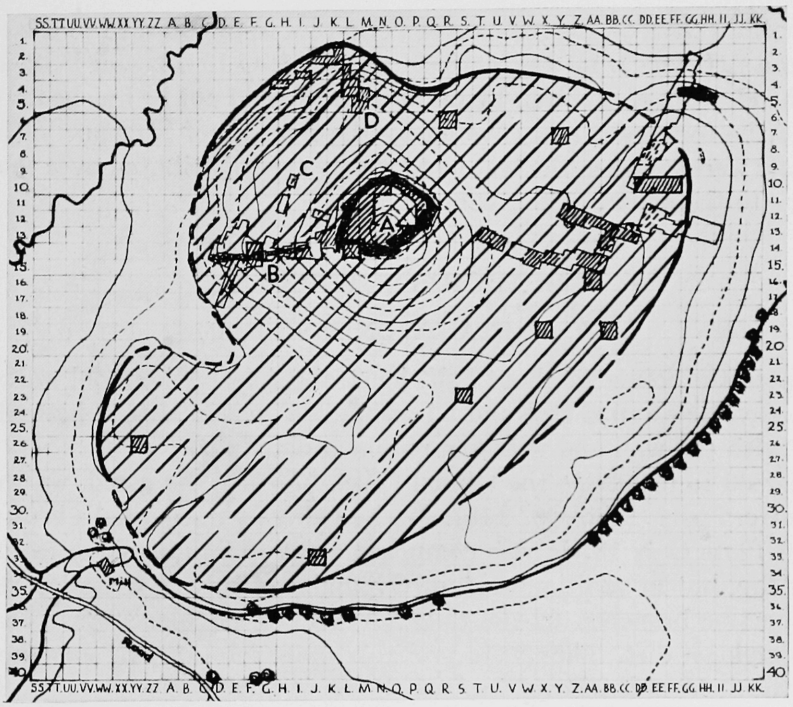

FIG. 276.—SETTLEMENT PLAN OF ALIŞAR IV

Most types of stone objects survived unchanged from Period I (cf. p. 30, n. 3). The pear-shaped Alişar II mace head also survived. A stone vessel appeared for the first time in Alişar IV.

There are no bone objects characteristic of this period.

Actual glass, in the form of beads, was used for the first time in Alişar IV, though glazing was known by the people of Period II.

The manner of disposing of the dead is unknown to us.

SETTLEMENT

Stratum IV covered Mounds A, B, C, and D and their slopes, and a large part of the terrace (Fig. 276). Only a narrow marginal strip along the northern and eastern mound edges was uninhabited.[1] The Alişar IV town of the Hittite Empire was the most extensive and probably

[1] This explains the fact that at the eastern slope the Alişar II stratum cropped out at the very surface.

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the most powerful settlement of all periods represented at the Alişar mound. Apparently a small but strong citadel dominated and protected the settlement from the top of Mound A, where it was built perhaps on the foundations of earlier fortifications. The town proper extended down the slopes of the citadel mound and inclosed it on all sides, increasing the elevations and filling the depressions left in the mound by its predecessors. In addition to the citadel, an important building seems to have existed in the southwestern section of the mound in Plot YY 26.

The average thickness of Stratum IV in the citadel (on Mound A) and in the section where Plot YY 26 was excavated is about 2.50 to 3 meters. In the remaining parts it averages about 1 meter. Often only the occurrence of potsherds indicated the presence of Alişar IV refuse. The settlement plans of the other periods show which strata lie above and below Stratum IV in the respective plots.

The most important data on the remains of Period IV were obtained in the citadel complex, Level 4 on Mound A (Plots L 11–14, M 10–14, N 13–14, O 13–14, and P 12–13). Here again we regret that the clearing of Stratum IV on Mound A could not be finished. About one-third of the interior of the fortress is still covered by the remains of Stratum V (Level 3). Many Period IV artifacts were found in the test plots which were distributed over the mound, giving us information as to the extent of the stratum.

ARCHITECTURE

THE CITADEL ON MOUND A

In 1927 we traced the course of about half the strong Alişar IV citadel wall of Level 4. We found ornamented vessels and sherds and a few "bullae" with "Hittite hieroglyphic" inscriptions associated with the wall and with the rooms adjoining it.

In 1928 we started to penetrate the citadel (Figs. 277–78). As usual, we worked by plots, starting in the eastern part (Plots O–M 13). We had already uncovered a brown-red layer just below Level 3 in Plots O–N 13. It was composed chiefly of the residue from *kerpich* bricks disintegrated by fire, but in addition contained remains of roofing material, still showing impressions of supporting branches .02–.03 thick. A series of circular storage or refuse pits had been dug in this reddish dirt. They were probably of Level 3 origin, since none of them extended down to the floors of the Level 4 rooms. Some of these pits were bottle-shaped, as deep as 1.50, with a diameter of 1.00–1.50 at the bottom and about half that width at the top. We had not noticed them during the clearing of the bottom of Level 3 because the upper portion of their contents was ordinary soil or the débris from ruined houses. Such partly used pits can be recognized only when the black refuse dirt is struck, for the unused upper parts are not traceable.

The average depth of Level 4 was 2 meters, some spots being as deep as 3 meters. In the upper portions potsherds occurred only sporadically. The thickness of this upper, relatively sterile layer indicates that considerable time elapsed after the citadel period before another occupation took place.

Parallel with the excavation of the buildings of Level 4, the clearing of the citadel wall inclosing them was continued. The course of the outer edge was determined by a series of narrow trenches 2–3 meters wide, alternating with blocks of soil left to serve as buttresses.

At the close of the 1928 season about two-thirds of the interior of the citadel had been cleared. Although the top of the inclosing wall was only a few centimeters below the mound surface, the central structures were covered by a culture deposit about 6 meters thick.

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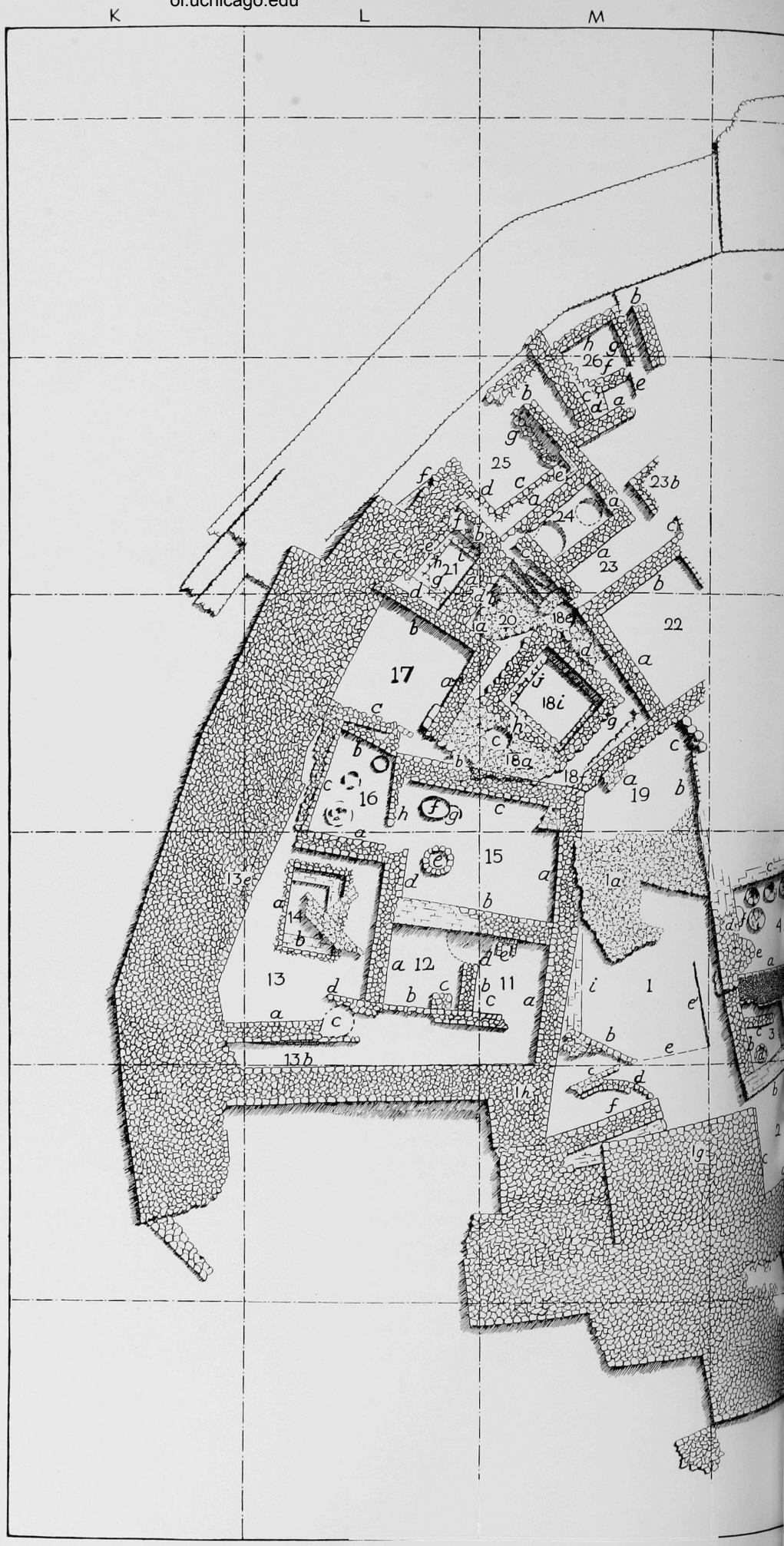

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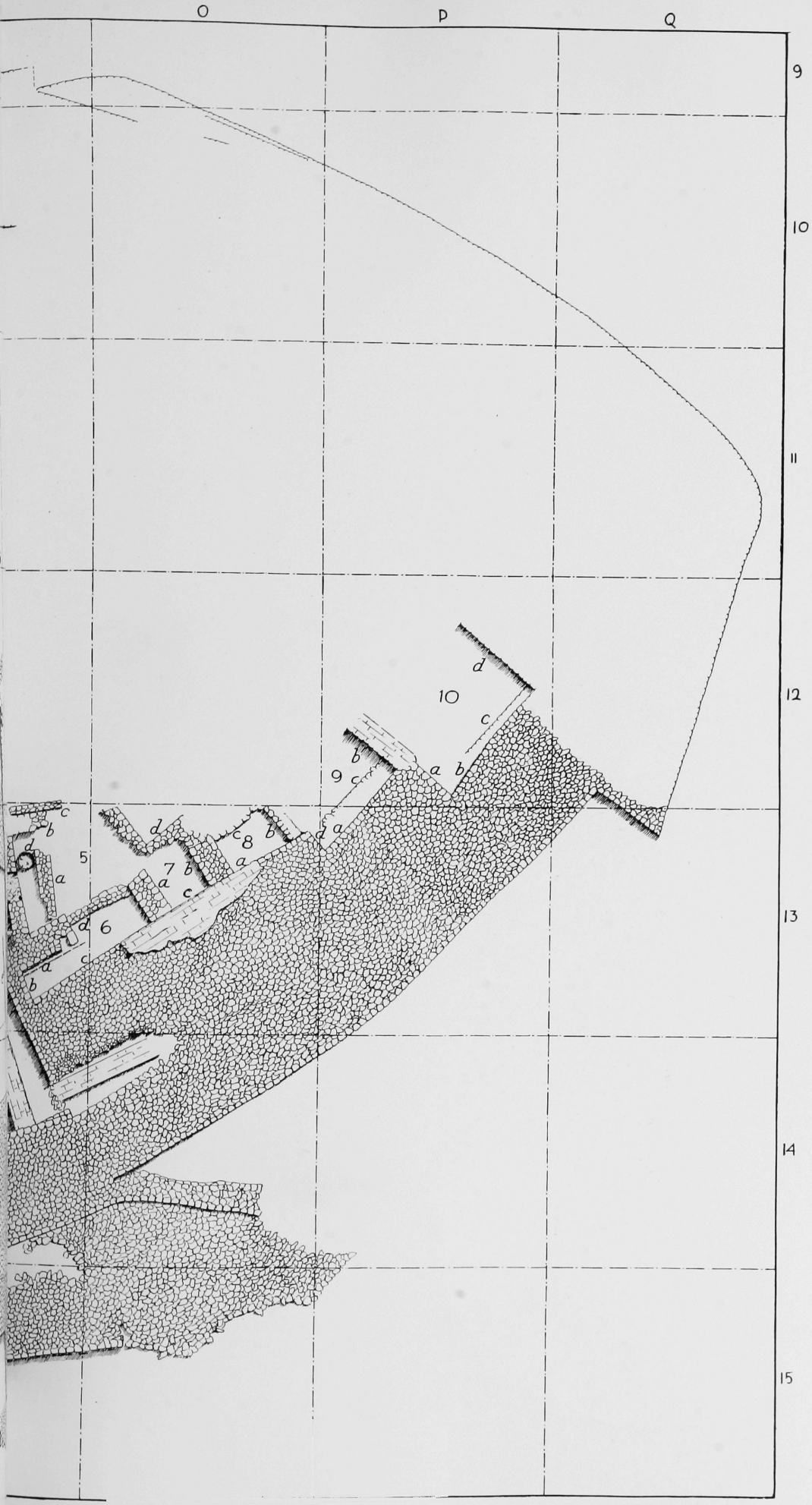

N Mound A. Scale, 1:250

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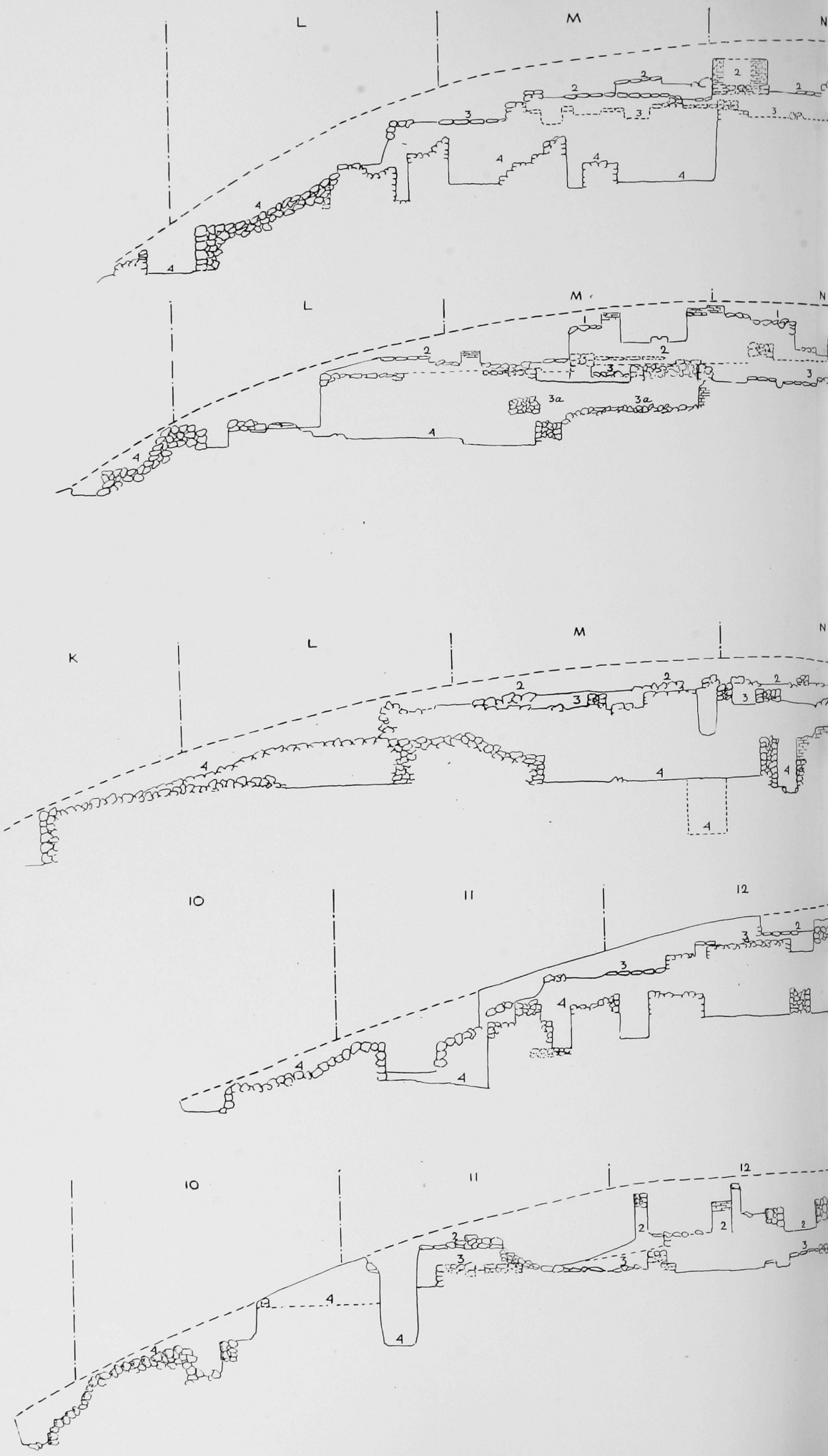

FIG. 278.—CROSS-SECTIONS OF ARCHITECTURAL LEVELS 2,

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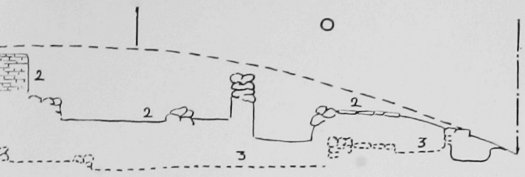
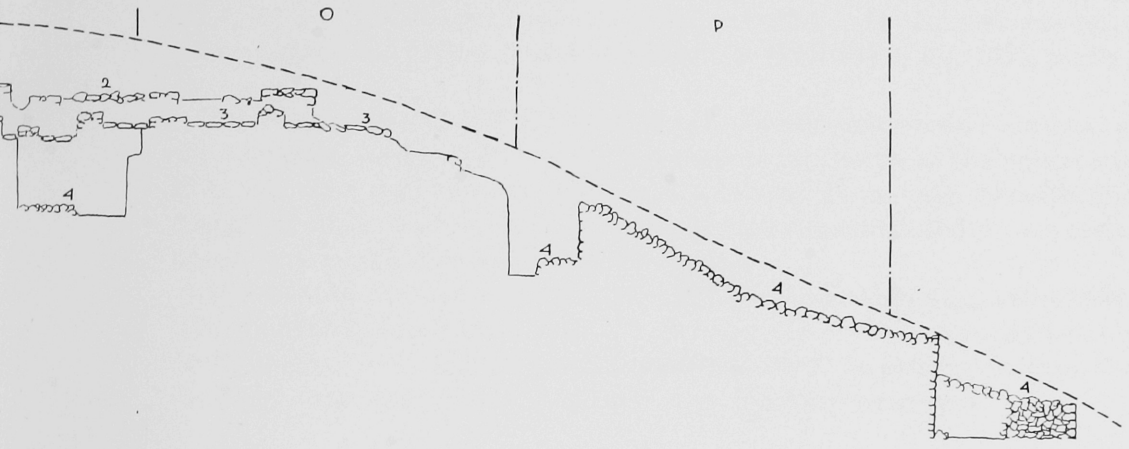
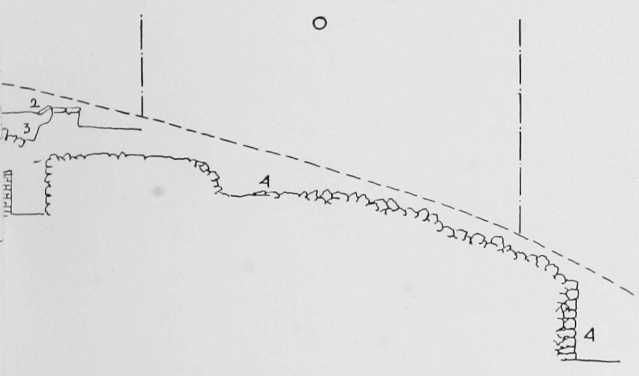


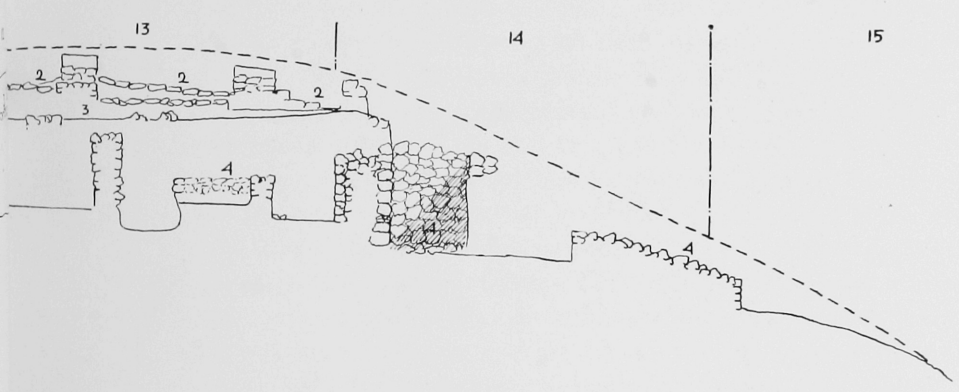
Cross-Section on Plot Border 11–12



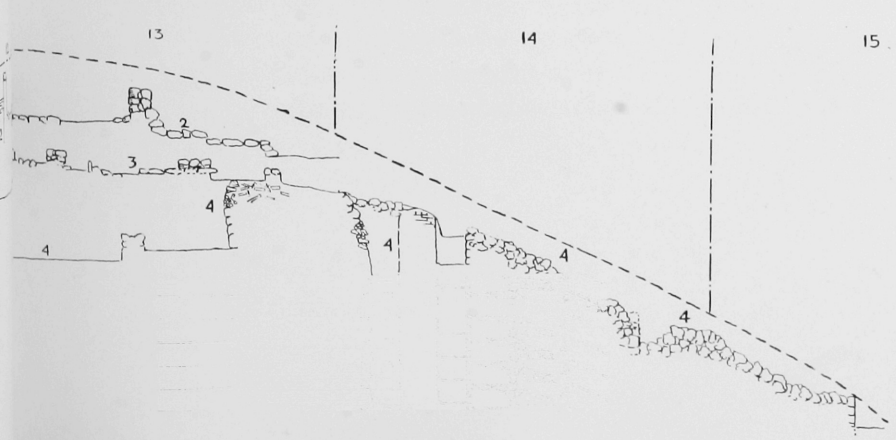
Cross-Section on Plot Border 12–13



Cross-Section on Plot Border 13–14



Cross-Section on Plot Border L–M



Cross-Section on Plot Border N–O

on Mound A, Following Plot Borders. Scale, 1:200

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The Citadel Wall

The citadel is roughly oval (cf. Fig. 277), its long axis extending northeast to southwest, its southeast curve flattened. The strong wall inclosing the citadel has been described in a previous publication,[1] but a few more points should be mentioned here.

The average breadth of the wall is 4–5 meters. In Plots O 13–14 it is 10 meters wide, but some rooms are probably hidden beneath the huge rock pile, as suggested by the *kerpich* wall in Plot O 14. In the center of the southern section the wall is almost 13 meters wide. At this spot (Plots O–M 14–15) the peculiar course of the wall suggests a gateway, though no actual entrance into the citadel has been found. In Plot L 14 the wall was relatively narrow; but perhaps there had been a double wall here (see Wall 13*a* in Fig. 277), partly destroyed by later construction.

The west wall breaks off in Plot K 14. It may once have been connected with the wall end in the southeast corner of Plot L 14, but there is no clue as to the actual situation. From Plot K 14 the west wall extends north and northeast at an even breadth of 4.00–4.50, until it breaks off once more in Plot L 11, where it is superimposed on an earlier wall. There are many such proofs of rebuilding in this region.

The front of the wall, relatively straight, is preserved in places to a height of 3 meters, but this is certainly much lower than it was originally. It may actually be only the substructure of the original wall. Rather small stones were used. In some parts even the lowest stones are no larger than those above; elsewhere large boulders were used.

The Eastern Building Complex

Section 1 is roughly trapezoid, without any subdividing walls. It is suggestive of a courtyard, especially if it proves to be connected with Section 19, which now appears to be separated from it by a pavement or road bed of rubble and rocks (1*a*). The latter is more recent than the walls inclosing the "courtyard," since it averages 1.40 above their bases and abuts or even overlaps their edges. The wall fragments at the south end of Section 1 are difficult to define. Wall 1*f* (1.30 high) is an offshoot of the citadel wall. Its base is level with those of the rectangular block 1*g* (1.25 high) and the trapezoid block 1*h* (.80 high), and also with the bases of Walls 1*b* and 1*d;* it is abutted by Wall 1*d*. Wall 1*c* is superimposed on Wall 1*d*. Wall 11*a* seems to be partly superimposed on 1*i*, a well built *kerpich* wall the bricks of which are light brown with numerous white limestone particles. The east wall of Section 1 is well built and straight. The interstices between the stones are filled with mud or with *kerpich*-like soil containing limestone particles. Two flat stones lie beside Wall 4*d*. Wall 3*b* is 1.40 high.

A puzzling situation was encountered when the base level of the walls was reached. Thin white bands appeared (1*e* and 1*e'*), parallel to the edge of 1*g* and to the east wall of Section 1. By digging in the corner formed by the two lines, it was determined that they are the upper edges of earth walls whitened by fibrous matter (Fig. 279). We found these to be the sides of Pit 1*j* (Figs. 280–81), which is about 9.50 by 5 meters long and averages 2 meters in height. No *kerpich* bricks were visible. The floor is coated with a layer, .002–.003 thick, of the same fibrous gray-white or gray-brown substance which covers the walls. There is no opening of any kind, and therefore the pit must have been entered from above. It is irregularly quadrangular with somewhat curved sides. Its south wall slants toward the inside, and *kerpich* Wall 1*i* had been built on top of its west wall. The purpose of this pit is problematical. It appears to have been excavated by the occupants of Level 4, perhaps for the storage of grain or other supplies. This might explain the coating on the floor and walls. All the pottery found

[1] See *OIP* VI, chap. vii.

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in it is of Period IV, though Period III pottery was found in other sections at a depth corresponding to the floor of the pit (cf. pp. 220 and 231).

Section 2 is bordered on the east and north by exceedingly well built *kerpich* walls on stone foundations, Nos. 2*a* and 2*b* (Fig. 282). Both are preserved to a height of 2.80 and extend .50 below the floor of the room. The floor line is indicated by a clearly traceable line of demarcation on the stone foundation. Below this line the stones preserve the natural rock color, the mud filling is light brown, and there is no whitewash or plaster. Above, the wall stones are darker, the mud filling is gray on the surface, and patches of gray-white plaster with white

FIG. 279.—SOUTHEAST CORNER OF SECTION 1. CENTER, WALL 3*b*; FOREGROUND, PIT 1*j*; UPPER RIGHT, MEN WORKING IN SECTION 2

limestone particles are visible on and between the foundation stones as well as on the *kerpich* front. The light brown, brown, and gray *kerpich* is 1.20 high and well marked. The plaster coating is .01–.03 thick. In Wall 2*a* only the two lower courses of bricks are stretchers; all the upper courses are headers. In Wall 2*b* the surface toward Section 2 is composed of stretchers, but the face toward Section 3 seems to have been made with less care (cf. Fig. 285). No definite arrangement of the bricks could be seen, and fragments seem to have been used as patches. Gray-white plaster is present on this face. There are two series of beam holes extending through the entire breadth of Wall 2*b*. The lower series, .06–.08 wide, is directly above the stone foundation. The upper series is .55–.65 above that, and the holes are .14–.15 wide. There had been other beams running lengthwise inside the wall.

Wall 2*d*, 1.35–1.55 high, forming the inner face of part of the citadel wall, slants toward the outside. On Wall 2*c* indications of an additional building phase were noticed. At a level

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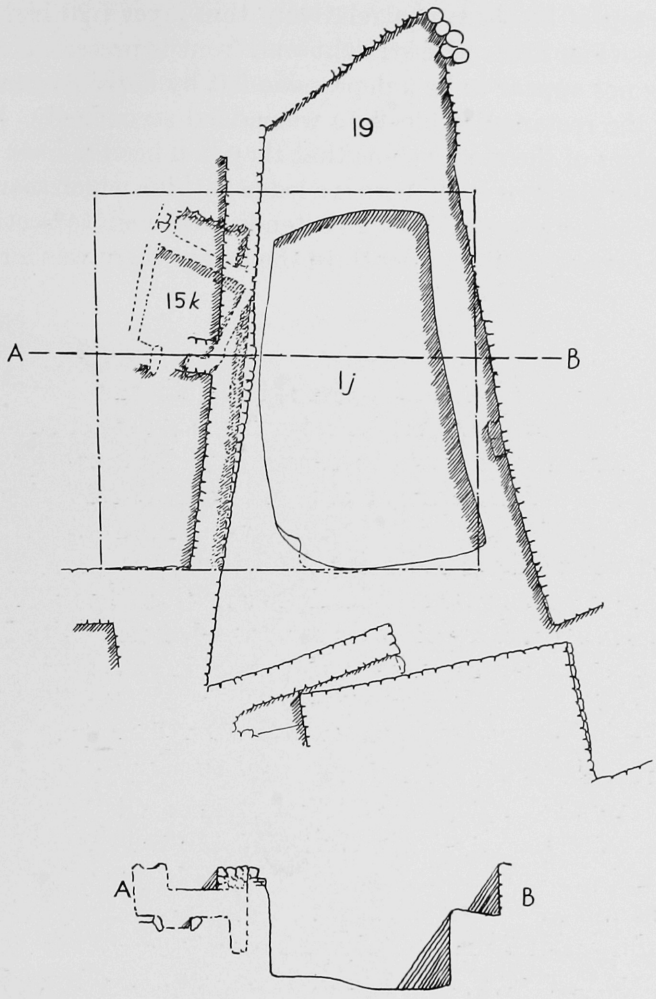

FIG. 280.—PLAN OF SUPPLEMENTARY EXCAVATION IN LEVEL 4 ON MOUND A. SCALE, 1:200

FIG. 281.—SOUTHWEST CORNER OF PIT 1*j*

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corresponding to the top of 2*d* there is a relatively thin layer (.20 high) of soil mixed with irregularly lying stones (Fig. 283). The straight wall front is preserved above and below this layer. The latter does not appear to be a depression left by a disintegrated supporting beam. It may indicate that the rectangular block 1*g* was added secondarily. Here, as in the other rooms, the battered edges of the stones show that they had been re-used (cf. p. 18). On Walls 2*d* and 2*c* about .20 below the floor level there is a ledge .30 high which seems to be the top of an older wall. There is a similar offset on Wall 2*b* extending through to Section 3 (Fig. 284). The fact that in the layer corresponding in depth to the ledges there was a change in the pottery

Fig. 282.—Corner Formed by Walls 2*a* and 2*b*, from the South

type would indicate that the ledges were parts of older walls. Here Period IV ware disappeared, and only Period III pottery occurred.

In Section 3 the plan (see Fig. 277) suggests that Wall 3*a* is a continuation of 2*a*. However, there are several differences in construction. The top of the stone foundation of 3*a* is .60 below that of 2*b* (Fig. 284), whereas in Section 2 the foundations of Walls 2*a* and 2*b* have the same height. There is no whitewash on the eastern face of 3*a*, though 2*a* and 2*b* are whitewashed on both faces. In Wall 3*a* the *kerpich* bricks, though not as clearly defined as those of Wall 2*a*, appear to have been arranged in alternate courses of stretchers and headers. It is not known whether this arrangement was carried out consistently, because this wall is not as well preserved as 2*a*. Moreover, the Section 3 face of Wall 2*b* was not as well constructed as the Section 2 face. However, in spite of these deviations, there is no doubt that Walls 2*a* and 3*a* and the two rooms were contemporaneous. There are four beam holes in Wall 3*a* directly at the

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base of the *kerpich* layer (see Fig. 284). A large, roughly oval hole (.10×.20) appeared .95 above the stone foundation in the corner where Wall 3*a* abuts Wall 4*a*. The remains of a partly disintegrated beam were found in this hole.

FIG. 283.—SOUTHWEST CORNER OF SECTION 2

The floor level of Section 3 is marked in the same way as that of Section 2. Wall 3*b* is 1.50 high; its base is at the floor level about .50–.60 above the bases of 3*a* and 2*b*. It was constructed of rather small stones (Fig. 285). Its upper edge is about .50 above the stone foundation of Wall 2*b*. We found no traces of a *kerpich* layer. The base of Wall 4*a* is actually .30 above the floor level of Section 3. Only a short section of this wall face is preserved. Wall 3*c*, narrow and frail, one or two courses high, is level with the floor of the room. Its relation to the other walls is doubtful. A stone pit (3*d* in Fig. 285) was dug into the southwest corner of the room, the upper edges of its lining slabs being flush with the floor. Its average depth is .35. It is not fire-blackened, and it contained no more charcoal particles or ashes than did the refuse filling of the room. There was a piece of sun-dried brick which had been burned red, but this is not sufficient evidence to prove the pit a fireplace. It was probably a storage bin.

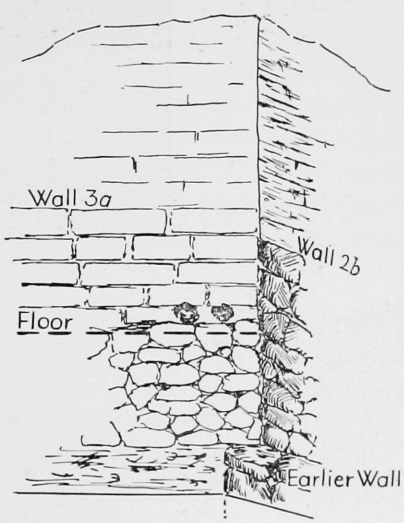

FIG. 284.—WALLS 3*a* AND 2*b*

The level of the wall bases of Section 4 is .70–.80 above the floor level of Section 3 (cf. Wall 4*a*, above). Only by

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removing the walls of Section 4 would it be possible to determine whether there are underlying foundations connected with the walls of Section 3, or whether the two rooms were simply built in terrace fashion in accordance with the topography of the mound. The objects uncovered do not show any striking variations. During the excavation this room was called the

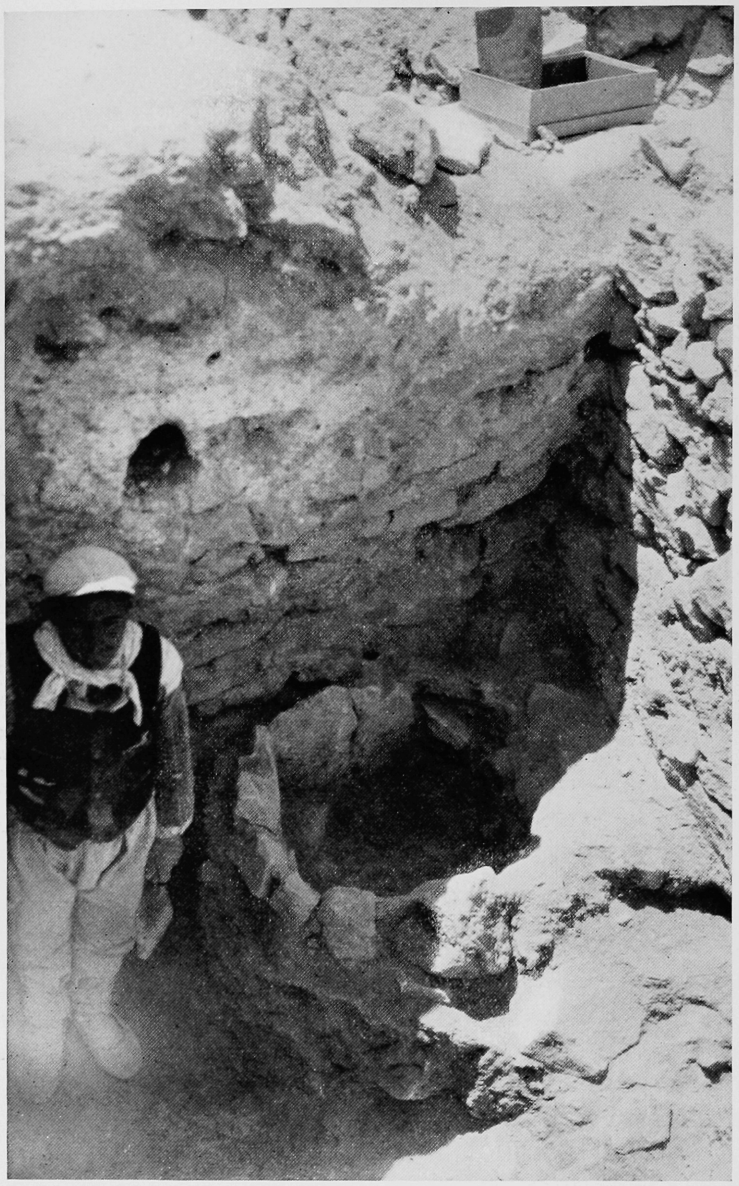

Fig. 285.—Southwest Corner of Section 3, Showing Pit 3*d*

"storeroom," because four large storage vessels were uncovered in it (Fig. 286). Three were arranged along Wall 4*c*, and one stood beside Wall 4*d*. All were broken, but could be partly restored. The narrow bases of these vessels were sunk into the floor, with their bottoms .20–.30 below the level of the wall bases.[1]

The walls here are not as high as those of Sections 2 and 3. No. 4*c* has a low stone foundation (.40 high) and a relatively high *kerpich* layer (.75). Wall 4*b*, 1.65 high, has a stone foundation

[1] Professor Ernest Mamboury of the University of İstanbul directed our attention to the fact that in some regions the modern Turks store their drinking-water in a similar way.

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of about .50. The almost indefinable *kerpich* disappears at the northern end. Wall 4*d*, 1.90 high, has a stone foundation slightly lower than that of 4*b*. Here also the *kerpich* fades out in the northern section, though the west face of the continuation of this wall shows a *kerpich* layer .80 high. Wall 4*a* is preserved to a height of 1 meter. Its northern face (Fig. 287) was built of relatively large, well selected stones with straight surfaces. The interstices were filled in part with small stones and mud. No traces of *kerpich* were found. There is a layer of rubble .20–.25 high on the present top of the wall; the original top must have been much higher. The rubble layer hardly extends beyond the edges of the wall. Such a feature was not found in connection with any of the other walls, and it is difficult to explain it.

Two shelflike projections, one of stone (4*e*) and one of *kerpich* (4*f*), are connected with Wall 4*d*. Both are a little higher than the floor and may actually have served as shelves. A fireplace (4*g*) is marked by a thin *kerpich* wall .30 high on the east face of which there was a coating of

FIG. 286.—SECTION 4 FROM THE WEST, SHOWING STORAGE VESSELS AND THE DOORWAY IN WALL 4*b*

ashes. Remains of a fire pot (4*h*) of a somewhat earlier date were half hidden under the easternmost storage vessel, .30 below the base of Wall 4*b*.

The only doorway noticed is in Wall 4*b* (Fig. 288; cf. Fig. 286). Even the charred framework was partly preserved. The opening is about 1.10 wide; remains of vertical posts, approximately .10 in diameter, stand in holes on each side of the doorway. The bottoms of these posts seem to be about .30–.40 above the wall bases. At about the same height remains of a horizontal beam appeared (see Fig. 288). Most of the doorway was filled with wall remains, lumps of burned *kerpich*, and refuse soil; but the southern third was filled with well set stones which showed that at one time it had been partly walled up.

There is no well defined room in Section 5. Yellowish brown and dark brown soil was mixed with lumps of white lime and charred wood. Only a few stones appeared in the rubbish filling the gaps in the walls. A charred and partly decayed piece of wood (.37×.12×.04) stood in the northeast corner of the doorway leading into Section 4. Only a few wall fragments occurred. Wall 5*a* is .80 high. Its lower courses are below the level of Wall 4*b*. Fire pot 5*d*, situated between the two walls, is also below the base of Wall 4*b;* it corresponds approximately to the level of fire pot 4*h*. The relation of the two narrow walls 5*b* and 5*c* cannot be determined until the adjacent area is excavated.

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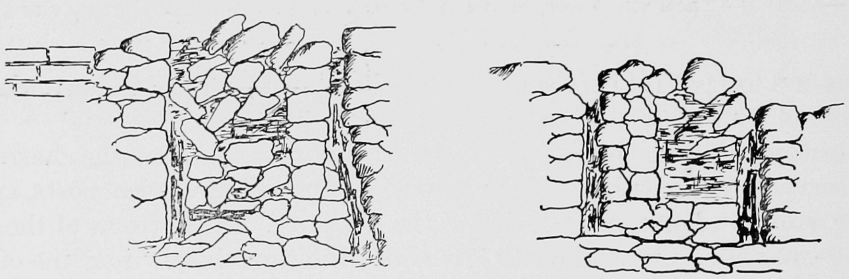
Wall 6*c* of Section 6 is part of a long wall which also borders Sections 7 and 8 and part of 9. There is little doubt but that this forms the inner face of part of the citadel wall, the outer face of which extends diagonally through Plots O 14 and P 13. Sections 6–9 have the appearance of parts of a defense system. The apparent breadth of the citadel wall at this point is

FIG. 287.—WORK IN SECTION 2. WALL 4*a* IN THE FOREGROUND



A *B*

FIG. 288.—DOORWAY IN WALL 4*b*. *A*, FROM THE WEST; *B*, FROM THE EAST

astonishing (cf. p. 217). Two walls in N–O 14 are unexplained. One is of stone and seems to be a continuation of Wall 2*d*. Parallel to it is a *kerpich* wall the top of which had been partly visible in the stone pile covering this entire area. The north face of the *kerpich* wall was excavated to a depth of 1.60, but no stone foundation appeared. Large stones and rubble were present all the way to the bottom of the excavation. Though the outline of the wall is clear, the *kerpich* marks are indistinct, and measurements could not be obtained. The bricks are light brown and gray, with many white limestone particles. It may be that at this spot rooms had been filled with stones in order to broaden the defense wall.

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The base of Wall 6*a* is .70 above that of 6*c*. On top of the wall (1.10 high) is a layer .85 high of kerpich burned red-brown, mixed with rubble and stones. The rubble layer of Wall 4*a* (.20–.25 thick) extends onto the top of the west end of Wall 6*a*. The top of an older kerpich wall is visible .50 below the base of Wall 6*a* (Fig. 289). Wall 6*b* is 1.55 high, and its base is flush with that of 6*c*. There is a layer .30 high, containing stones and rubble but little *kerpich*, on top of 6*b*. An earlier *kerpich* wall is visible here also, .50 below the base of 6*b*. A layer of ordinary refuse soil lay between the two. The badly crumbled Wall 6*d*, consisting of only one or two courses, connects Wall 7*a* and a point directly below the base of 6*a*. These walls seem to have been poorly built, but their irregularities may have been caused by pressure of the superimposed deposits or by overhanging upper courses.

In Section 7 the bases of Walls 7*a*, 7*b*, and 7*c* are all on the same level. Their average height is 1.25; in one spot Wall 7*b* is .40 higher, and the northwest end of 7*a* is only .20 above the floor. On top of the citadel wall here and in Sections 6 and 8 part of the original *kerpich* layer is preserved. This is the only spot on the entire citadel wall where traces of an upper structure were found. The bricks are well defined; the joints, irregularly staggered (Figs. 290–91). The *kerpich* was hardened and turned red-brown by a conflagration, traces of which are visible also on other walls of Sections 7 and 8 (cf. p. 213). The bricks at the edges of Walls 7*c* and 8*a* are well preserved, but the *kerpich* layer extending toward Section 6 and downhill soon fades into a mass of poorly defined brick fragments and red-brown dirt.

The corner of a room (7*d*) appeared north of Section 7, but most of this inclosure remains hidden beneath the remains of Level 3. The outer edges of the two visible walls had crumbled, but it is evident that the room is somewhat above the level of Walls 7*a* and 7*b*.

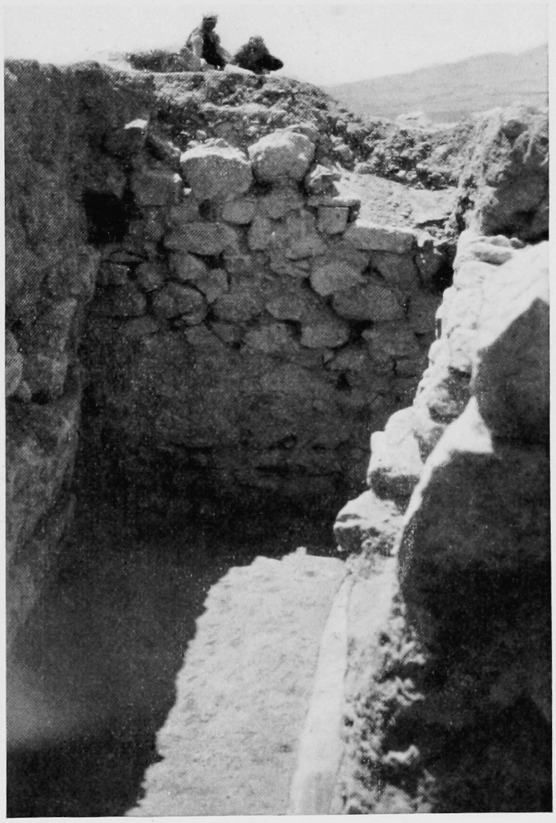

FIG. 289.—SECTION 6 FROM THE NORTHEAST, SHOWING EARLIER KERPICH WALL AT THE FLOOR LEVEL

Wall 8*b* and a row of slabs (8*c*) protruding from below the unexcavated deposit, are more recent than the other two walls of Section 8. Their bases are .70 above the floor and the bases of the older walls. There are *kerpich* remains on top of Wall 8*b*. The height of this wall is .75, including the stone foundation of .40. Walls 8*b* and 8*c* show no traces of the fire which blackened the inner face of 8*a* (Fig. 292). A few stones on the face of Wall 7*b* were discolored. Wall 8*a* is 1.60 high, the *kerpich* courses being .50. The floor line at the base of this wall is shown by the sharp line of demarcation between the fire-blackened stones of the wall and the unaffected light brown soil. About .40 above the floor line there is a row of six black circles in the interstices between two stone courses. There is a row of seven similar spots somewhat higher. The spaces between circles vary from .015 to .030. The circles are remains of burned poles ranging from .032 to .045 in diameter. The purpose of the poles is hard to explain, for they would have been too weak for wall supports.

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Section 9 is the second of a series of three terracelike steps formed by the citadel wall. Its floor is 1.30 below that of Section 8. Wall 9*d* is badly broken, but its course is clear. Wall 9*a* is preserved to a height of 1.40. The front of it is poorly built of carelessly set stones; in spots small stones were used for the foundation layers, with larger stones above. The top of an

FIG. 290.—BURNED KERPICH BRICKS ON TOP OF THE INNER FRONT OF THE CITADEL WALL IN SECTION 7

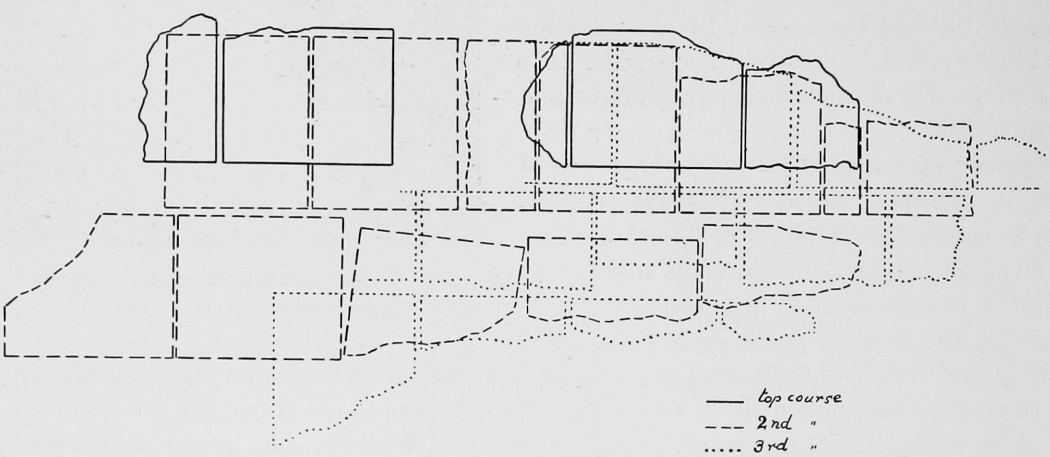

FIG. 291.—DIAGRAM OF BURNED KERPICH COURSES ON TOP OF THE CITADEL WALL IN SECTION 7. SCALE, 1:20

earlier wall (9*c*) forms a ledge running parallel to 9*a*. The earlier wall is .60 high and seems to continue below the bottom of the excavation. Wall 9*b* may have been built upon an earlier foundation corresponding with Wall 9*c*, though no particular break or offset was noticed. Its stone foundation rises 1.30–1.60 above the bottom of the excavation, which is .60–.70 below the base of Wall 9*a*. The northwest end of 9*b*, including a *kerpich* layer of 1.50, is 2.80 high. The *kerpich* is cracked in several places and slants toward Section 10. The bricks are light brown with grayish yellow shades. The unexcavated block of soil bordering Section 9 on the northwest was 3.10 high when the excavation stopped.

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Half of Section 10 had been excavated during 1927. A "bulla" inscribed with "Hittite hieroglyphic" and some scaraboids had been found associated with Period IV ware. This section, the lowest of the three terraced steps of the citadel wall, is opposite a sharp offset of the outer face.[1] The base of Wall 10*b* is 2 meters below that of Wall 9*a*. Its height is 1.10–1.40. Here also, the top of an apparently earlier wall appears, Ledge 10*c* (.90 high), protruding from underneath Wall 10*b*. Wall 10*a* had crumbled badly. Only its lower layers are preserved. The same is true of Wall 10*d*, though it is preserved to a height of 1.10 in places. An unexcavated block of soil 5 meters high borders Section 10 on the northwest.

FIG. 292.—FIRE-BLACKENED INNER FRONT OF THE CITADEL WALL IN SECTION 8, FROM THE WEST

With few exceptions the structures described above belong to one building complex, contemporaneous with the citadel wall, with which most of the sections are connected. There are living- or storage-rooms (Sections 3 and 4) and parts of the defense system (Nos. 2 and 6–10). Strong and well preserved walls are frequent. The *kerpich* walls in Sections 2, 3, 7, and 8 show good building technique. Some of the stone walls are well built, but others were constructed without much care. Traces of a conflagration which probably destroyed part of the citadel are visible in Sections 6–8.

The remains found in the various rooms are described elsewhere; but it may be emphasized that the pottery associated with the buildings is the typical Period IV ware, which was replaced in the lower level of Section 2 by the Period III pottery.

[1] Another section adjoining Section 10 to the north had also been cleared during 1927. It was still lower and formed a fourth step.

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The Western Building Complex

As a rule, the same types of objects were found in that part of the excavated area to the west and north of Section 1 as were found in the eastern complex. There had been more rebuilding in the western complex; in some sections there seem to have been several occupational levels. Many superpositions of structures were encountered. Objects uncovered in apparently reoccupied rooms appeared to be different from those found in rooms showing only original foundations. Though Period IV pottery prevailed, there was an admixture of apparently late specimens of Period III pottery (cf. p. 220 describing Section 2).

In Section 11 Walls 11*a* (1.20 high) and 15*b* (1.65 high) belonged to an earlier complex. Walls 11*b* and 11*c* (.50–.75 high) were added later, their bases being .80 above those of the earlier walls. On both faces of Wall 15*b* patches of gray-white soil with white limestone particles cover parts of the wall stones and fill the interstices. This material resembles mortar, but it is loose and soft. No such coating was noticed on the other walls. Fireplace 11*e* (.25 deep), leaning against Wall 15*b*, is associated with the more recent walls, being level with their bases. It is inclosed by a narrow *kerpich* wall, .10 high, in the form of a rectangle open at the south. There is a layer of small stones on top of the *kerpich*, and the floor of the fireplace is covered with a thin layer of gray-white ashes. Storage pit 11*d*, between Sections 11 and 12, is more recent than either occupational level, for a part of Wall 11*b* of the later occupation was destroyed when the pit was made.

In Section 12 the bases of Walls 12*a* and 12*b* are level with those of the later walls of Section 11 (11*b* and 11*c*). Only one course of 12*b* is preserved, whereas two or three courses of 12*a* remain. The part of Wall 15*b* bordering Section 12 was apparently reconstructed into a *kerpich* wall during the second occupation. The top of its stone foundation is level with the base of Wall 12*a*. Above this is a layer of *kerpich*-like soil 1.00–1.30 high. Though samples taken from various parts show the straw marks of *kerpich*, no brick marks were found in the wall. On top of the wall there is a pile of broken bricks (of later date?) burned red-brown. On the face of the *kerpich* there is a patch (.08 thick) of the gray-white material which was observed on the stone portion of the same wall farther east. A rectangular arrangement of stones (12*c*) stands about .30 above the bases of the neighboring walls. It resembles a fireplace, but no ashes were found and the stones are not blackened.

The larger part of Section 13 had been excavated during 1927.[1] On its hard-tramped, *kerpich*-like floor pottery vessels of Period IV type were found. They had been blackened by a fire which had also discolored many of the crumbled wall stones (cf. p. 213) and had charred, and thereby preserved, grains of barley and wheat. The floor level of this section, corresponding to the bases of Walls 12*a*, 13*d*, and 16*a* of the later sublevel, is only .20–.30 below the present top of the inner face of the citadel wall. Wall 13*a* connects with the citadel wall, and their tops are on the same level. The base of 13*a* is .85 below the floor level, as seen in Pit 13*c*, which penetrates to the same depth. This pit, like 11*d*, is more recent than either level, for parts of Wall 13*a* and of 13*d* as well were destroyed when it was made. Wall 13*b* (1.10–2.95 high) was built on a foundation belonging probably to Stratum III.[2] The level difference between the bases of the assumed Period III and Period IV foundations is 1 meter. Walls 13*a* and 13*b* probably formed part of the defense system. Wall 13*a* no doubt extended much farther prior to its destruction by the later building activities. The two walls combined, together with the passage between them, are about 1 meter narrower than the west wall of the citadel. The height of the citadel wall decreases from 1.70 in Plot K 13 to 1 meter at its southern end. On

[1] See *OIP* VI, Plots 30 and 35.

[2] Pottery of Period III was found under Section 17 at a depth corresponding to the base of Wall 13*b*.

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top, near the inner edge, there is a step (13*e*) one layer of stones high. It seems to be continued to the north by other fragments in Plot L 12.

The tops of the walls inclosing Section 14 are level with the hard-tramped floor of Section 13. The base of Wall 14*a* is level with that of 13*a*, .85 below the floor of Section 13. Along the other three walls are *kerpich* ledges averaging .40 high, their tops about .25 below the floor of Section 13. The ledges do not reach as deep as the base of Wall 14*a* and do not seem to rest on stone foundations, though a few stone slabs were visible below the northern ledge. There is gray-black refuse soil under Wall 14*b*. The bricks are brown, light brown, and gray, with white limestone particles. Two abutting wall fragments on top of Section 14 are more recent than any of the neighboring walls.

FIG. 293.—SECTION 15 FROM THE NORTHEAST. THE CONE IN THE CENTER HOLDS A SURVEY STAKE

Because of its position in the corner of the citadel wall, with a commanding view of the surrounding territory, it has been suggested that Section 14 may have been a guardroom. There are two possibilities as to its relation to the neighboring structures: it may have belonged to the older occupational level, or it may have been constructed, pitlike, in the floor of Section 13 by the builders of Walls 12*a*, 13*d*, etc. The fact that its walls were not faced on the outside suggests that it was merely a stone-lined pit.

Section 15 is unusually large; it is the same size as Sections 11 and 12 combined, with which it has one wall, 15*b*, in common. It is probable that there were originally two large adjacent inclosures, of which the southern one was subdivided at a later time. The level of the wall bases in Section 15 (Fig. 293) corresponds approximately to the earlier level in Section 11. Wall 15*b* is 1.80 high. The eastern section is of stone, whereas the western part of the stone foundation seems to be surmounted by *kerpich* (cf. Section 12). Wall 15*d* (.30–1.00 high) is broader than 12*a*, which it continues. Wall 15*a* (1 meter high) is partly covered by a pile of

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rubble and rocks, 1*a*, and a short wall fragment. Wall 15*h* is .30 high; Wall 15*c*, 1 meter. Two occupational levels are strikingly shown in this room by the superpositions of two fire pots, 15*f* and 15*g*. Fire pot 15*g*, the better fired of the two, is at the level of Wall 15*b*. There were ashes and charcoal particles on its floor, and the wall is blackened. The base of fire pot 15*f* was .85 above that of 15*g*. The oval wall of brittle brown earthenware is double. A circular arrangement of stones, 15*e*, is level with 15*f*. It resembles a fireplace, but its stones are not blackened and no burned material was found in it.

Fig. 294.—Pit 15*k*

A small inclosure (Pit 15*k*; Fig. 294, cf. Fig. 280) was encountered about 1 meter below the top of Wall 15*a*, at the level of fire pot 15*g*. The thin *kerpich* walls, averaging .35 in height, are without foundations. A thin coat of whitewash covers them. The bricks are light yellowish brown. A doorway is flanked on each side by upright stone slabs, a horizontal *kerpich* brick resting on the eastern one.

The walls of Section 16 are low, in most places only two or three layers high. Their bases are level with the floor of Section 13 and with the present top of the citadel wall at this point. Wall 16*b* is actually built over the citadel wall for a short distance. Two fire pots and fragments of a third correspond in level to fire pot 15*f*. The fire pots in the two rooms show the same technique, but those in Section 16 are smaller and circular instead of oval.

In Section 17 the excavation was carried to the level of the base of the citadel wall, 1.60 below the floor of Section 16. The citadel wall here ranges from 1.10 to 1.40 in height. Wall 16*b* is superimposed on a layer of refuse soil, which in turn is on top of Wall 17*c*, the base of which is level with that of the citadel wall (Fig. 295). The bases of Walls 17*a* and 17*b* are at about the level of the present top of the citadel wall at this point. They are 1.50 high. The west end of 17*b* rests on top of the citadel wall (Fig. 296), like the west end of Wall 16*b*. Two stones, .30–.40 high, leaning against Wall 17*a* about .20 above its base, deserve mentioning because a similar arrangement was found in Section 1 in connection with Wall 4*d*. The stones in Section 17, apparently unwrought, are roughly quadrangular. They may have formed steps leading into a poorly defined opening in Wall 17*a* (Fig. 297).

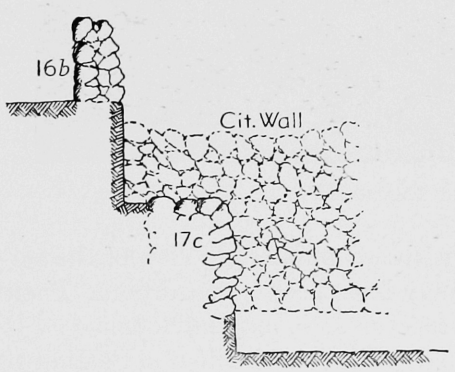

Fig. 295.—Cross-Section Showing Difference in Levels of Sections 16 and 17. Scale, 1:50

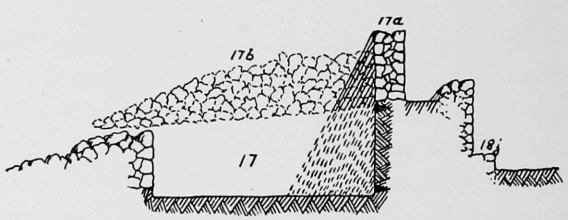

Fig. 296.—West-East Cross-Section of Section 17

Charcoal layers, apparently floor stratifications, are marked at the bases of Walls 17*a* and 17*b* (level with the top of the citadel wall) and of the lower 17*c*. There can be little doubt

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that 17*c* belonged to the structures occupied by the original builders of the citadel. Here the potsherds furnished a striking example of their value for dating finds. In the higher sublevel in Section 17, inclosed by Walls 17*a*, 17*b*, and 16*b*, we found a number of decorated vessels of the Period IV type and great numbers of sherds of the same ware. As the excavations went deeper, sherds of this type became more and more rare, and only those of Period III were found in the lower structures inclosed by the lower courses of the citadel wall and Wall 17*c*. It appears, therefore, that the original builders of this section of the citadel were the makers of the Period III ware.

Pavement 18*a* overlaps Wall 15*c*. It is penetrated by Pits 18*c* and 18*b;* part of the latter broke into the north face of 15*c*. Pavement 18*d*, containing Pit 18*e*, is level with Pavement 18*a*.

FIG. 297.—SOUTHEAST CORNER OF SECTION 17, SHOWING STEPS(?) (NEAR TOP OF PICTURE)

They are at or near the tops of some walls of Level 4 and are ascribed to 3*a*, a sublevel of Stratum V of which we have found only fragmentary walls. Some of the pits may belong to even higher levels. The walls bordering Section 18 (Walls 17*a*, 15*c*, 18*f*, and 22*a*) all belong to the upper sublevel of Level 4. The walls inclosing Room 18*i* extend about 1 meter deeper than the border walls of Section 18 (Fig. 298). Here, as in Section 14, there is a question as to whether we are dealing with an earlier room or with one which was dug into the floor. Here too there is scarcely a suggestion of outside facing of the walls, whereas the inner faces were constructed rather carefully. A broken-down spot in the center of the northwest wall, .95 above the base, suggests a window or a step. The walls of a still earlier inclosure (18*j*) protruded from below the walls of Room 18*i*. The relations of these structural remains to those uncovered in Section 17 are shown in Figure 296, but the actual situation here and in the sections to the north can be determined only by carefully slicing off the upper remains and observing the pottery distribution. If Room 18*i* was actually sunk into the floor, we could assume that it had a specific purpose, perhaps religious. No household utensils were found here, and relatively few sherds occurred. An intermediate level is indicated by Wall 18*g* (Fig. 299), which

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protrudes from beneath Wall 18*f* but is considerably above the floor level of Room 18*i*. At present it would seem that all these remains, except the two pavements, belong to the stratum characterized by Period IV pottery.

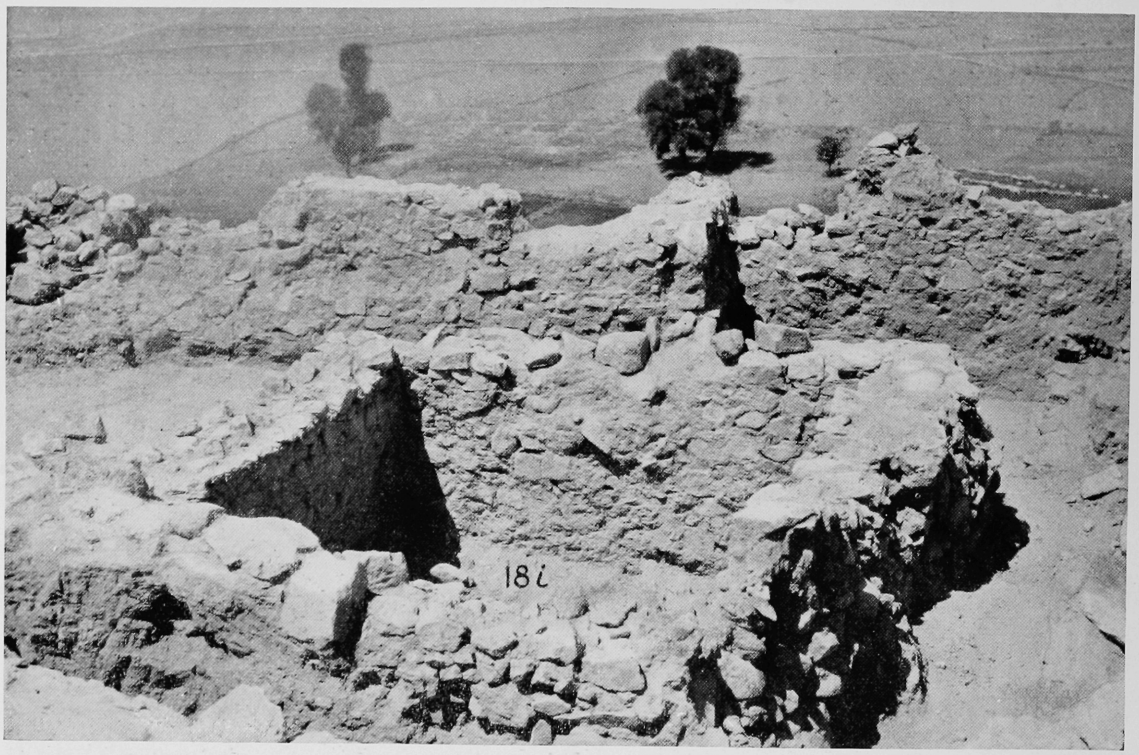

Fig. 298.—Room 18*i* from the East

Fig. 299.—Passage Southeast of Room 18*i*, Showing Wall 18*f* Superimposed on Wall 18*g*

Perhaps Sections 19 and 1 formed one extensive open court of roughly trapezoid shape (see p. 217) interrupted by a large pit and by the pile of rubble and rocks (1*a*) which rises 1.00–1.30 above the floor level. Only the west face of Wall 19*b* has been excavated. On parts of it a distinct *kerpich* layer is preserved, which disappears toward Wall 4*d*. The bricks are gray-white with a light brown shade, showing only faint contours, so that measurement is difficult. To judge from the height (1.50) of the stone foundation at the north end of the wall and from the height (.90) of the *kerpich* layer rising above the rock pile, 19*b* was about 2.40 high. The stone foundation recedes at the top, and the *kerpich* layer has oozed out and hangs over toward the west. There is a peculiar arrangement at the point where Wall 19*b* breaks off. We found there five roughly globular rocks (19*c*, Fig. 300) .40–.50 in diam-

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eter. Two of them are partly below the top of the wall; three lie above. Ordinary refuse soil is beneath them. Excavation of the area to the east may give clues as to their purpose and their relation to the structures.

FIG. 300.—NORTHEAST CORNER OF SECTION 19, SHOWING DIFFERENCE BETWEEN LEVELS 3 AND 4

Wall 18*f* (.80 high) abuts the corner formed by Walls 15*a* and 15*c*. The face toward Section 19 has crumbled. Above it is a short wall fragment, 19*a*, attributed to Level 3*a* (cf. p. 231).

In Section 20 pavement 20*a* (interrupted by pit 20*b*) and Wall 20*c* are level with the remains (pavements 18*a* and 18*d*) attributed to Level 3*a* in Section 18. Wall 20*d* and the upper part of Wall 17*b* seem to belong to the same level. Four wall fragments are superimposed one on another below Wall 20*c* (Fig. 301). The highest ledge corresponds approximately to the top of Wall 22*a*, and the lowest step extends deeper than the base level of Walls 22*a*, 18*f*, etc.

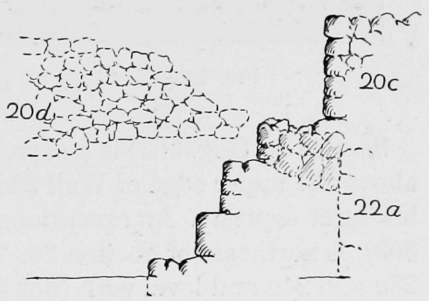

FIG. 301.—DIAGRAM OF SECTION 20, SHOWING SUPERPOSITIONS OF WALLS. SCALE, 1:50

Section 21 contains three sublevels of superimposed remains. Walls 21*a* and 21*b*, now only two courses high, correspond in level with Wall 20*d* and probably belong to Level 3*a*. Wall 21*c* of the same sublevel is scarcely more than a step on top of the rock pile formed by the remains of the citadel wall. It abuts Wall 17*b*.

Walls of the second sublevel are Nos. 21*d*, 21*e*, and 21*f*. They are built of small stones rather carefully set and forming a straight front .80–1.10 high. Their outer faces are covered by the later walls or the citadel wall, which at this point breaks down to a mere rock pile (see

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description of the citadel wall on page 217). The fourth wall is hidden below Wall 21*a* and Wall 20*d*. This room seems to belong to a level intermediate between the upper and lower levels of Section 17.

Only the upper edges of Walls 21*g*, 21*h*, and 21*i* are visible at the bottom of the excavation. The lowest room in Section 21 may correspond in level to the lower occupational layer of Section 17. The continuation of the excavation would show whether Period III pottery is associated.

Section 22 and Sections 23, 24, and 25 are oriented uniformly (Fig. 302). The floor of Section 22 is even with the main level of Section 18. Its walls (.80–.90 high) have rather straight fronts. They are of unwrought stones, many not larger than a fist, while others measure .20×.40. Above its eastern corner a wall of unexcavated soil rises 2.60 high.[1]

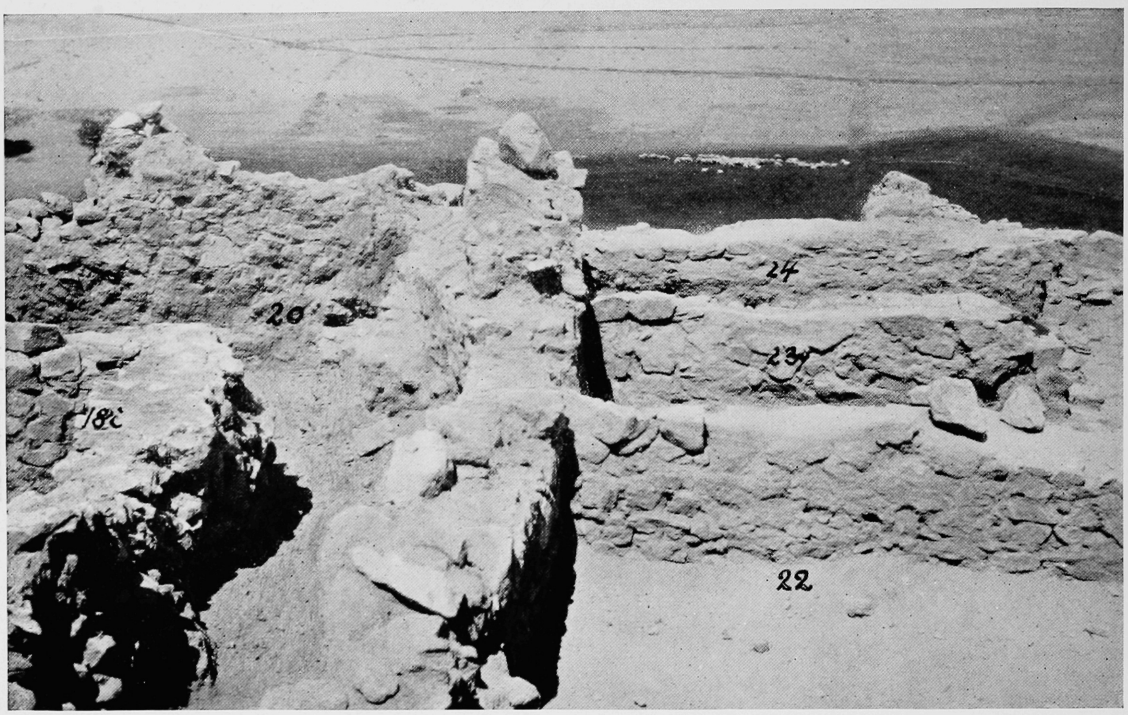

Fig. 302.—Sections 22, 23, and 24 and Corner of Room 18*i*, from the Southeast

Section 23 (Fig. 302) is a narrow passage bordered by Walls 22*b* and 23*a*. Wall 20*c* rises .20 above the upper edge of Wall 23*a*. To the northeast a fragment of Wall 23*c* projects from below later deposits. An exceptionally well constructed corner of a fragmentary room, 23*b* (Fig. 303), is northeast of Section 24. The base of this corner is about .35 above the bases of Walls 23*a* and 24*a* and level with that of Wall 25*a*. It is 1.40 high, rising about 1 meter above Wall 23*a*. A carefully wrought stone, .40×.22×.22, is set into the corner a little below its present upper edge. The other corner stones were apparently unwrought but carefully selected.

The southwest border wall of Section 24 was probably one of the superimposed walls below Wall 20*c*, perhaps the third one from the top. The northwest wall may have been 25*c*. Only two courses are visible of Wall 24*a*, which extends .30 below the base of Wall 25*a*. Two refuse pits, .30 and .40 deep, fill almost the entire interior of this section. They are presumably of later date.

[1] On top of this unexcavated soil is Passage 16 of Level 3, which will be described in *OIP* XX.

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In Section 25 we again penetrated to the base level of the citadel wall (Fig. 304) and found three sub-levels—four if we include that of Wall 20*c* (cf. also p. 233). The upper room is inclosed by Walls 25*a*, 25*b*, and 21*b*. These walls in themselves are only two or three courses high, though they stand about 2.60 above the bottom of the excavation. A fireplace, 25*e*, is situated in the eastern corner. Two of its walls, .40 high and .25 broad, are preserved; they were made of two rows of upright *kerpich* bricks. In addition a "plaster" of crude brown earthenware seems to have been on the inner face.

Walls 25*c* and 25*d* form the second sublevel. Wall 25*c* is .65 high, its base being 1.85 above the excavation bottom, which coincides with the base level of the defense wall. As suggested above, Wall 25*c* may have been the western border of Section 24.

The bottom layer of structures is represented by the inner citadel wall, by rock pile 25*g* cropping out from underneath the refuse layer on which Wall 25*b* stands, and by *kerpich* Wall 25*f*, the outer face of which is visible below the rock pile west of Section 25. In this *kerpich* wall the bricks seem to have been laid in uniform courses of headers. The wall extends to the very base of the citadel wall, as does Wall 17*c*. The pottery faithfully repeated the situation encountered in Section 17; again Period III pottery was associated with the bottom level.

FIG. 303.—CORNER OF A FRAGMENTARY ROOM, NO. 23*b*, FROM THE WEST

The situation in Section 26 resembles that encountered in Section 25 and in most of the sections adjoining the western citadel wall. We were able to record four structural sublevels in Level 4 (Fig. 305). Walls 26*b* (two to three courses high) and 26*a* (two courses high) represent

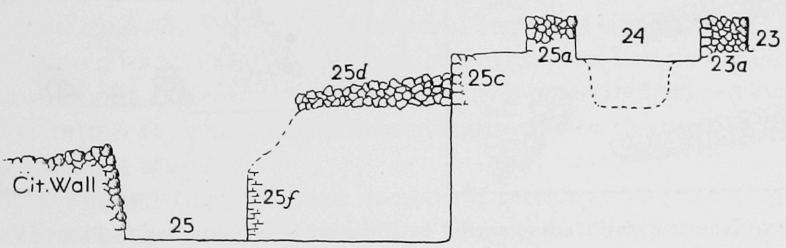

FIG. 304.—WEST-EAST CROSS-SECTION OF SECTIONS 23–25. SCALE, 1:100

the uppermost sublevel. Wall 26*a* abuts 25*b* and stands directly on Wall 26*c*, which may correspond in level with 25*c*. Wall 26*c* is two or three courses high, its base being level with the upper edges of Walls 26*d* and 26*e* of the third sublevel. These two walls are about 1 meter high and are built of rather small stones, like Walls 21*d*–21*f*. Their bases are .30 above the floor of the lowest room, which is inclosed by Walls 26*g* and 26*h*, .60–1.00 high. A rock pile (26*f*) may belong to either the third or fourth level. The floor of the lowest room corresponds

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to the base of the inner face of the citadel wall, from which it is separated by a narrow passage. The outer edge of Wall 26*h* and its continuation to the southwest are poorly preserved.

The situation in regard to the pottery was not as clear in Section 26 as in the other sections excavated to the base of the citadel wall. Period IV pottery occurred in a gap between Walls 25*b* and 26*c* only .50 above the base of the citadel wall, 1.50 lower than the level for which it is characteristic. Even in the lowest room of Section 26, there were no characteristic Period III sherds. Careful observation of the distribution of the sherds in the adjoining area, still unexcavated, should clarify the situation.

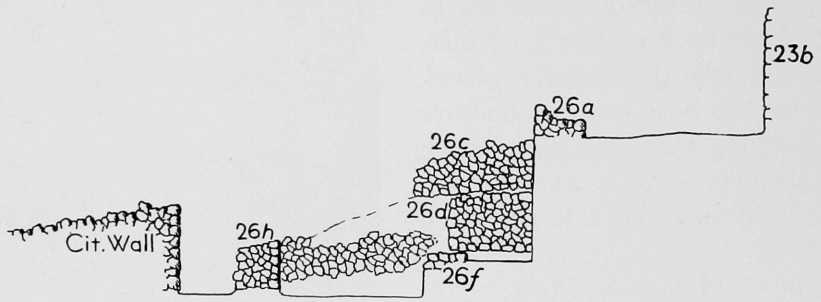

Fig. 305.—West-East Cross-Section of Section 26. Scale, 1:100

Summary of the Citadel

The analysis of the structural remains uncovered in Level 4 succeeded rather in showing the complexity of the situation than in clearing it. It would take the patient work of a full season to excavate this Alişar IV fortress, to section carefully the successive sublevels, and to determine accurately the relations of the often disconnected architectural fragments. At the present stage of the excavation we can see only a few coherent sections of complexes and many prob-

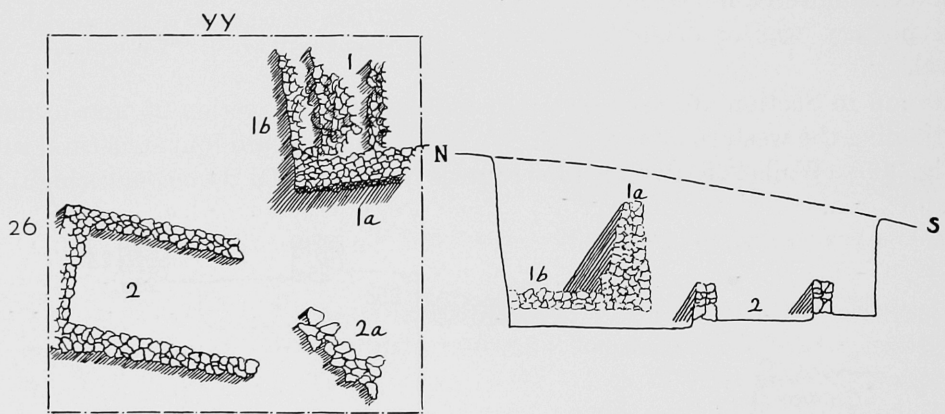

Fig. 306.—Plan and North-South Cross-Section of Stratum IV Structures in Plot YY 26. Scale, 1:200

lematical fragments of buildings or rooms. There are spots where from three to five sublevels are recognizable. The accurate definition of the building phases of the citadel wall itself is dependent on the determination of the sublevels within the citadel.

A study of the plan (cf. Fig. 277) shows what may have been an open court (Sections 1 and 19), east of which Sections 2–10 form a coherent complex. West of the court(?) Sections 11–16 have a uniform arrangement, and north of it Sections 22–25 apparently belong together. The court(?) contained a large storage pit, and Section 4 seems to have been a storage

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chamber. Sections 3, 11, 12, 15, and 16 appear to have been living-rooms; Room 18*i* may have been a cult room; Section 14 has been tentatively defined as a guardroom; and Sections 2 and 6–10 may have been connected with the defense of the fortress.

Who were the original builders of the citadel? It was interesting to notice that Alişar III pottery was found at most points where the excavation was carried down to the inner base of the citadel wall (Sections 2, 17, 25, and below 11). We assume therefore that the Period IV citadel was constructed in part at least on a fortification of Period III.

MEASUREMENTS OF BRICKS

Wall	Color	Length	Breadth	Height
1*i*	Light brown; white particles	.43, .435, .44	.38, .405	.09, .10, .105
2*a*	Light brown, brown, and gray	.385–.405	.28–.315 (mostly .28 or .29)	.075–.08
2*b*	Light brown, brown, and gray	.385–.39	.28–.29	.082–.095
7*c*	Red-brown (burned)	.45, .45, .46	.355, .35, .37	.14, .14, .14, .12
9*b*	Light brown with grayish yellow shades	.46, .46, .465, .465	.....	.12, .125, .13
15*i*	Light yellowish brown			
Brick *a*	.....	.40	.27	.105
Brick *b*	.....	.38	.275	.10
19*b*	Gray-white			
Brick *a*	.....	.53	.30	.12
Brick *b*	.....	.51	.30	.11

Wall	Color	Dimensions at Wall Front	Remarks
2*b*	Light brown, brown, and gray	.20, .29, .315, .34, .345, .40	Fragments used as patches
14*b*	Light brown, brown, and gray; white particles	.33, .28, .325, .28	Lowest layer
		.50, .33, .345	Second layer
19*b*	Gray-white	.33, .41, .32, .315, .28, .31	
25*f*	.....	.38, .36, .36, .345, .355	Measurements from three superimposed layers; the narrow sides of the bricks presumably point toward the outside; height ranges from .085 to .095
		.34, .36, .37, .34, .345	
		.355, .35, .36, .36	

PLOT YY 26

Plot YY 26 is on the edge of a low flat hillock southwest of the main mound. In making our usual preliminary examination of the surface, we found some Alişar IV sherds and a fragment of Roman *terra sigillata*. When the excavation began we struck first a thin deposit of the Roman period, followed by an exceedingly thick layer from the Hittite Empire period, extending from a depth of about .50 to about 4 meters. At the bottom of the excavation we encountered the top of Stratum II, which had not been indicated by the surface pottery because of the thickness of the later strata.

Period IV pottery dated the well built structural remains (Fig. 306), which strongly resembled the buildings in the Alişar IV citadel on Mound A. There alone have walls been uncovered which could compare in height and solid construction with Wall 1*a*, 2.20 high (A in Fig. 307). Wall 1*b* abuts Wall 1*a* (Fig. 306), but most of it has crumbled to a height of .50. Two rows of stones, somewhat terraced upward toward the east, also abut Wall 1*a*. The corner formed by Walls 1*a* and 1*b* (B in Fig. 307) belongs seemingly to an important building of Period IV. A fine "bulla" (b 2675) with "Hittite hieroglyphic" symbols was discovered near the base of Wall 1*a*. This leaves no doubt of its association with the Hittite Empire (Stratum IV).

The walls of Room 2, 1 meter high, are even better constructed than Wall 1*a*. Stones as large as .70×.40 form the foundations of the straight walls. Mud and small stones fill the

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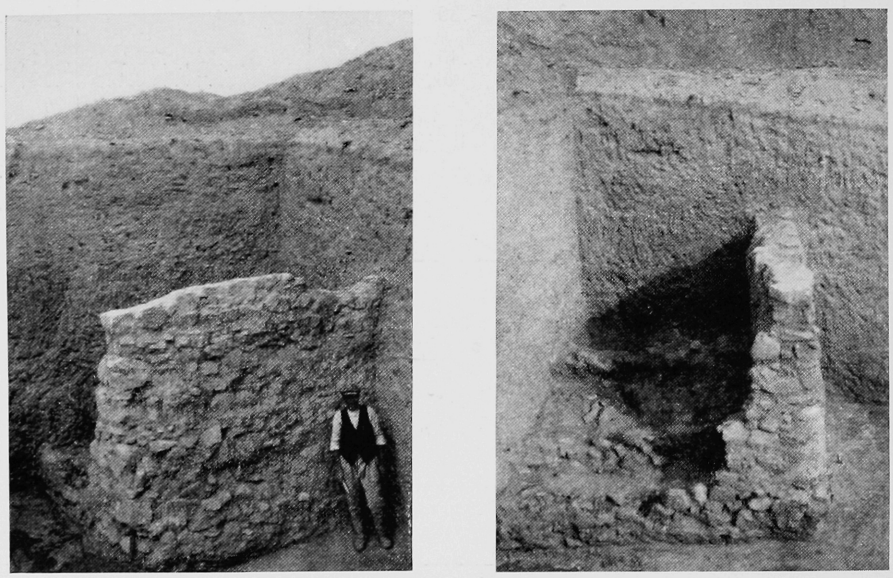
interstices. At the base the breadth of the walls is that of one or two rows of large stones; toward the top the stones become smaller and there are three rows. The eastern wall of Room 2 has disappeared. It may have crumbled into a stone pile (2*a*), though this is oriented differently.

PLOT FF 10

A thin layer of Stratum IV was uncovered in Plot FF 10, above the western part of Complex I of Stratum II (cf. p. 88 and Fig. 94). A shallow stone bin (*m*) and a short, thin wall fragment (*n*), each built of one row of small stones and now only one course high, were associated with a layer of Alişar IV pottery. A jar stood west of the bin at the level of its floor, and nearly all the sherds down to .70 deep were Alişar IV. Some classical sherds lay a little below the surface, and Period II sherds were mixed throughout the layer.



A *B*

FIG. 307.—SECTION 1 IN PLOT YY 26. *A*, FROM THE SOUTH; *B*, FROM THE WEST

POTTERY

The most significant difference between the Alişar III and Alişar IV pottery is the general use of the wheel by the Alişar IV pottery makers. Handmade pots still occur, however, and in some cases the technique is doubtful because the wheel marks may have been obliterated by the surface treatment.

The decoration of the Alişar IV vessels also distinguishes them from the earlier wares. To be sure, many elements of the geometrical Alişar III designs remain; but the "pothook" scroll (cf. Plates XXVI–XXVII) disappears entirely. Fill patterns of concentric rings are characteristic of Alişar IV pottery. Other curvilinear elements, rare in Alişar III vessels, are present in many Alişar IV decorations. There is an occasional human figure, and horned animals are favorite subjects in Alişar IV design, in contrast to the almost total lack of representations of life forms on Alişar III pottery. In general, we may say that the rigid geometrical type of Alişar III decoration was replaced by a much more flexible style with a greater variety of design elements.

The forms of Alişar IV pottery are more elaborate and often more graceful than those of

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Alişar III vessels. The forms so far identified include bowls, cups, pitchers, a zoömorphic(?) vessel, and jars. Vessel lips and handles are elaborated. The paste is as a rule light brown or buff and of medium fineness. Some thin-walled vessels have a rather fine paste. The surface is usually smoothed with a polishing-stone.

The colors of Alişar IV pottery are about the same as in Period III. The slips are shades of brown and buff, grayish white, and red. Light brown and light buff shades are most frequent. The designs are dark brown, gray, or grayish black. Red or brown-red is added in trichrome patterns.

PAINTED

Vessel b 1687 (Fig. 308; cf. Plate XXVIII), the only fairly complete Stratum IV bowl at present available for description, has a flat bottom. The surfaces are rather smooth and coated with a grayish white slip. The decoration was on the lip only and consisted of a simple pattern repeated three or four times; the two units preserved are rectangles bordered on either side by two dashes.

b 1687

Fig. 308.—Bowl with Decoration on the Rim. Scale, 1:2

Many sherds indicate the frequency of this vessel type in Stratum IV. Plate XXX A illustrates sherds of bowls decorated with similar simple lip patterns. The rim fragments suggest that these vessels resembled Bowl b 1687 in form also. Almost all the bowls of which sherds are shown in Plates XXX B to XXXII had broad, expanding plate rims. These rims are decorated on one or on both sides. Usually the pattern on the inner side of the rim, more openly exposed to view, is somewhat more elaborate than the outer pattern, which consists of simple lozenges and straight or undulating lines. The bottoms of the bowls are plain.

b 585

Fig. 309.—Small Decorated Jar. Scale, 1:2

Cup b 585 (Fig. 309; cf. Plate XXVIII) was found in Plot AA 16 at 1.60 below the surface. There were fragments of all periods, from Period I to the Roman time, in its find-layer; but Alişar IV sherds prevailed. Since, moreover, "Bulla" b 571 with a "Hittite hieroglyphic" legend occurred .30–.60 above the cup, we feel safe in ascribing it to Period IV. The large cup, .11 high, has a single handle raised somewhat above the lip, and the bottom is small and flat. Its light brown paste is medium to fine. The smooth exterior and the interior are light brown with buff shades, while the color of the decoration is brown. The main design of straight and undulating lines is clearly visible on the photograph. A dark brown band on the lip is connected with another band, .01 below, by a series of vertical lines. The lower band is straight on its upper edge and undulating on its lower edge. The handle is decorated with six horizontal strokes.

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Cup a 636 (Fig. 310) was found in the same room as Vessel a 637 (Fig. 311). It is .059 high. The neck is missing, but part of the handle is preserved. The bottom is flat. The paste is fine and light brown, and wheel marks show distinctly on the interior. Both exterior and interior are light brown, and the decoration is grayish black. A band of squares containing oblique crosses or wheel patterns encircles the body. A dot in the center of the wheel design indicates that its concentric circles were drawn by means of a mechanical device.

a 636 a 517

FIG. 310.—DECORATED CUPS. SCALE, ABOUT 4:5

a 637

FIG. 311.—SMALL DECORATED PITCHER. SCALE, ABOUT 1:2

Cup a 517 (Fig. 310) was found on the floor of a partly excavated room just inside the citadel wall in Plot N 10.[1] The fragment is .063 high, but the cup was probably somewhat higher. The handle has a circular cross-section; the bottom is slightly concave. The fine paste is light brown. The exterior, originally light brown, shows gray stains produced by fire. The red-brown interior is similarly discolored. Of the dark brown decoration, only traces of horizontal and vertical lines are visible.

[1] The chief excavations in this plot were made in 1927 and are not shown in Fig. 277.

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Pitcher a 637 (Fig. 311) was found with Nos. a 637*a*, a 640, and a 636 on the floor of a partly excavated room of the citadel in Plot N 13. The pitcher is .16 high. It is narrow-mouthed, has one handle, and the bottom is slightly concave. The medium paste is light brown. Wheel marks are visible on the interior, while the exterior is smooth. The interior is light brown; the exterior is coated with a light brown slip. The crude decoration consists of a series of straight lines and solid rectangles on the upper body of the vessel. The pattern is dark brown, with two elements only in red.

Pitcher a 637*a* (Fig. 312), found with No. a 637, is .06 high. The narrow neck is broken off; and a perforated protuberance on the upper body, either a broken spout or a handle end, has been reground. The bottom is flat. The light brown paste is medium to fine. Both surfaces are light brown, and the decoration is a slightly darker shade of brown. A star design radiates from the neck and is bordered below by three lines. These are connected by vertical and oblique strokes with three more lines, and an undulating line is the lower border of the design.

a 637*a*

FIG. 312.—SMALL DECORATED PITCHER. SCALE, 9:11

a 640

FIG. 313.—SMALL DECORATED PITCHER

Pitcher a 640 (Fig. 313) also was found with No. a 637. It is .107 high. The cylindrical neck suggests a slightly expanded spout, and one handle extended from the lip to the upper body. The bottom is flat. The medium to fine paste is light brown, as are the smooth surfaces of both interior and exterior. The pattern is dark brown, with an occasional red-brown line in the lattice patterns of the panels. The pattern is composed of five panels bordered above and below by groups of straight lines. The panel opposite the handle is inclosed on all sides by lattice designs, leaving an empty rectangle in the center. The two panels adjoining it each contain only one lattice in the center, while the two panels at either side of the handle have two lattices.

Pitcher a 1052 (Fig. 314) was found on the floor bordered by Wall 25*c* in Section 25 of the citadel. Its height without the missing bottom is .218. A single handle extended from the upper body to the lip. The paste is medium to fine and reddish. The interior is red-brown. The exterior has a grayish white slip with red stains. The dark brown decoration is simple. Two straight lines and a wavy line encircle the lower neck, dashes are visible on the lip, and some horizontal strokes appear on the lower end of the handle.

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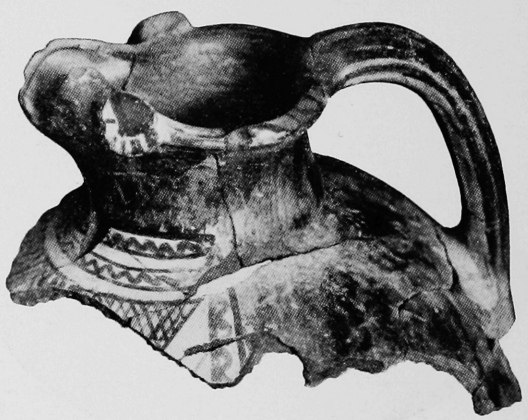
No. a 642 (Fig. 315) was found in Plot N 13 about .50–.70 above the Level 4 floor. The refuse in which it was found had been disturbed by pits dug by the occupants of Level 3 (Alişar V); so the vessel may have belonged to Period V instead of to Period IV.[1] Its clover-leaf orifice seems to have had an elevated bill-spout. Two disks, apparently representing eyes, are attached to opposite sides of the rim. The handle is still intact. The core of the medium paste is light brown, becoming reddish at the surfaces. The smooth exterior has a brown-red slip, and the interior is light brown. The decoration is grayish black and brown-red on a panel of grayish white. Grayish black bands border the panel, with wavy brown-red lines just inside. The borders at the top and sides are completed by other straight and wavy lines in grayish black. The main pattern is composed of grayish black hatched triangles interchanging with others combining grayish black and brown-red. The "eye disks" also have a grayish white background on which lines, alternately grayish white and brown-red, radiate from the center.[2]

a 1052

FIG. 314.—SMALL DECORATED PITCHER. SCALE, 2:5



a 642

FIG. 315.—NECK OF A LARGE DECORATED PITCHER. SCALE, ABOUT 1:3

The decorated sherds illustrated in Plates XXXIII and XXXIV appear to be from cups, pitchers, and small jars. However, it is difficult to identify small fragments; some of the sherds may be from large jars. Sherds 199, 799, and 774, with undulating surface (Plate XXXIII A), represent a vessel form of which no relatively complete specimen has been found. In general the designs are more delicate than those of the larger vessels. Life forms seem to be absent; but there are concentric rings, wheels, and the usual curvilinear and rectilinear elements.

Vessel a 132 (Fig. 316) was found with Jars a 131 (cf. Color Plate VI) and a 133 (cf. Fig. 333) in Room 17 of the citadel at the level of Wall 17*a*. It may represent an animal form, perhaps a duck or a turtle, though no body details are indicated.[3] Seen from the top, the vessel is circular, while the cross-section is oval with flattened top. The greater part of the narrow neck is missing. It may have been a simple bottle neck, or it may have been modeled in the shape of the animal represented. There is an elevated handle at each side of the body, and a broken handle on the top was once connected with the neck or lip. The paste is medium,

[1] A fragment of an almost identical vessel, No. a 669:13, was found on the floor of Level 3.

[2] For similar "eye disks" cf. *OIP* VI 257 and Plate I (No. 3239).

[3] Vessels with zoömorphic details are described on page 248.

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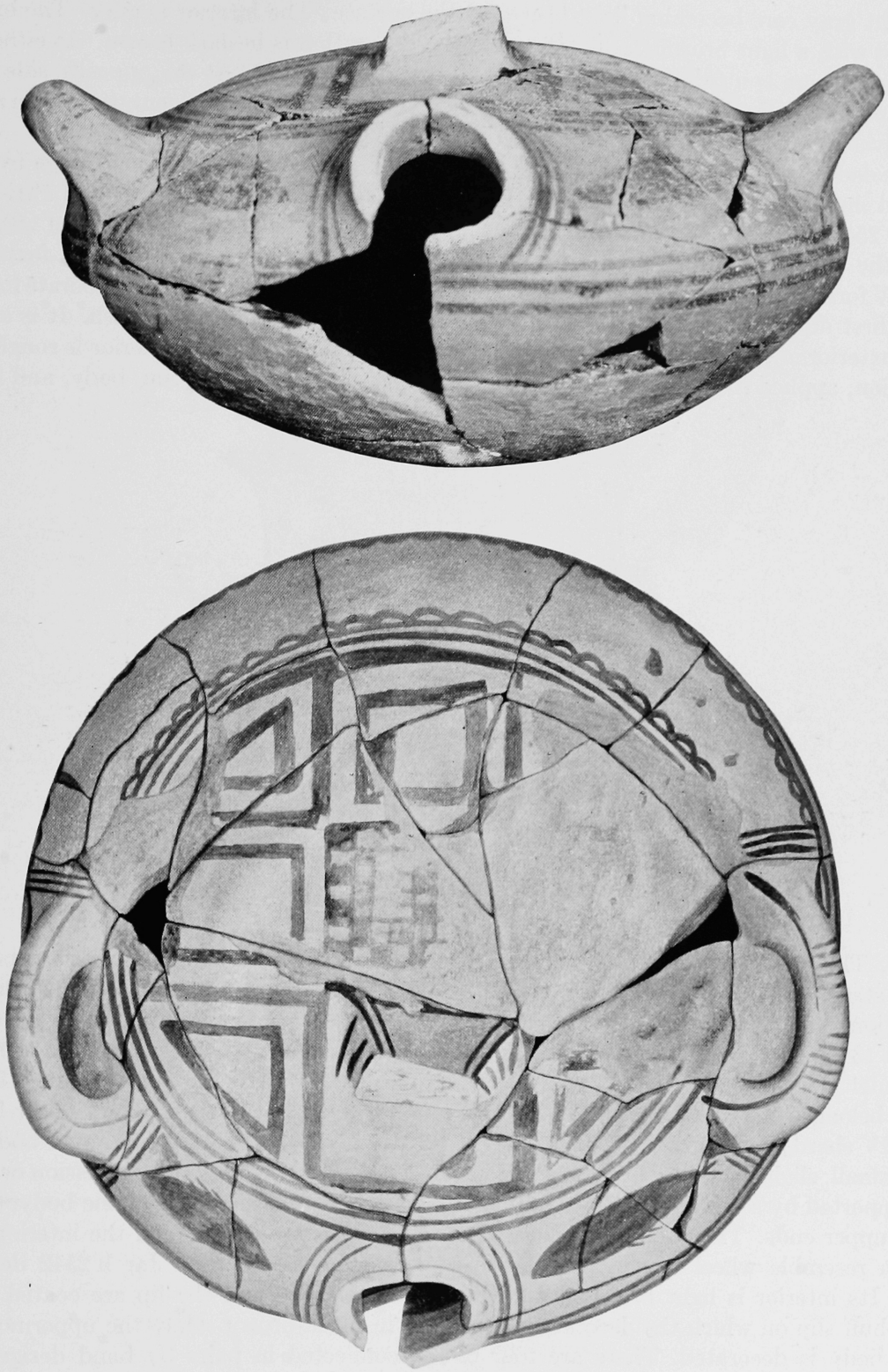

a 132

FIG. 316.—DECORATED ZOÖMORPHIC(?) JAR. FRONT AND TOP VIEWS, FROM A PHOTOGRAPH AND A PAINTING RESPECTIVELY. SCALE, 1:2

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with light gray core becoming light brown at the surface. The interior is gray. The exterior is coated with a light brownish buff slip, and the decoration is in dark brown. At either side of the neck there is a fish design, with the eye marked by a dot. At the opposite side of the vessel undulating lines are added. These two elements suggest the representation of an animal which lives in or near the water.

Large decorated jars were more frequent than other vessel types, if we may judge from the pots and sherds which have been found. They are also the most striking vessels of Period IV.[1]

Jar b 2542 (Fig. 317 and Plate XXIX A) was found in Plot J 33 at a depth of .40.[2] It is one of the best executed vessels of this type and illustrates many characteristic features of Alişar IV form and decoration. Its well modeled offset rim, and especially the elaborate handles, appear first during Period IV. Its surface is light brown, somewhat yellowish. It is smooth on the exterior and on the upper portion of the interior; the rest of the interior is rough. The decoration, applied in dark grayish brown, consists of three sections: rim, body, and handle

b 2542

FIG. 317.—DECORATED JAR. SCALE, ABOUT 1:5

designs. The main pattern, a series of four panels separated by the handle panels, represents phallic stags. The fill design of concentric rings is a typical and frequent motif of Alişar IV decoration.

Jar a 131 (Color Plate VI; cf. Plate XXIX B) was uncovered in Section 17 of the Alişar IV citadel. Jars a 132 and a 133 (cf. Figs. 316 and 333) were associated with it. All these vessels belonged to the level of Walls 17*a* and 17*b*, not to the lower layer where Alişar III and Alişar IV sherds were mixed (cf. p. 231). Jar a 131, about .425 high, has an oval body with a very small, slightly convex bottom, indicating that the vessel stood in a depression or that it was supported by some device. Two small flat handles, at opposite sides of the body, expand at the upper ends. The paste is medium and reddish. Some striations on the interior below the rim resemble wheel marks. The jar is considerably cruder than Jar b 2542 described above. Its interior is light brown, while the exterior surface and the lip are coated with a brown-buff slip on which the decoration is applied in black-brown. Only the uppermost part of the body is decorated. There are four circles connected in pairs by band designs. One

[1] See also *OIP* VI, "Middle Period III," pp. 257–60, and Plates II–IV.

[2] A rather thin layer of Alişar IV was here superimposed on the thick Alişar II layer in which we found cuneiform tablet No. b 2700 about 2.50 below the find-spot of Jar b 2542.

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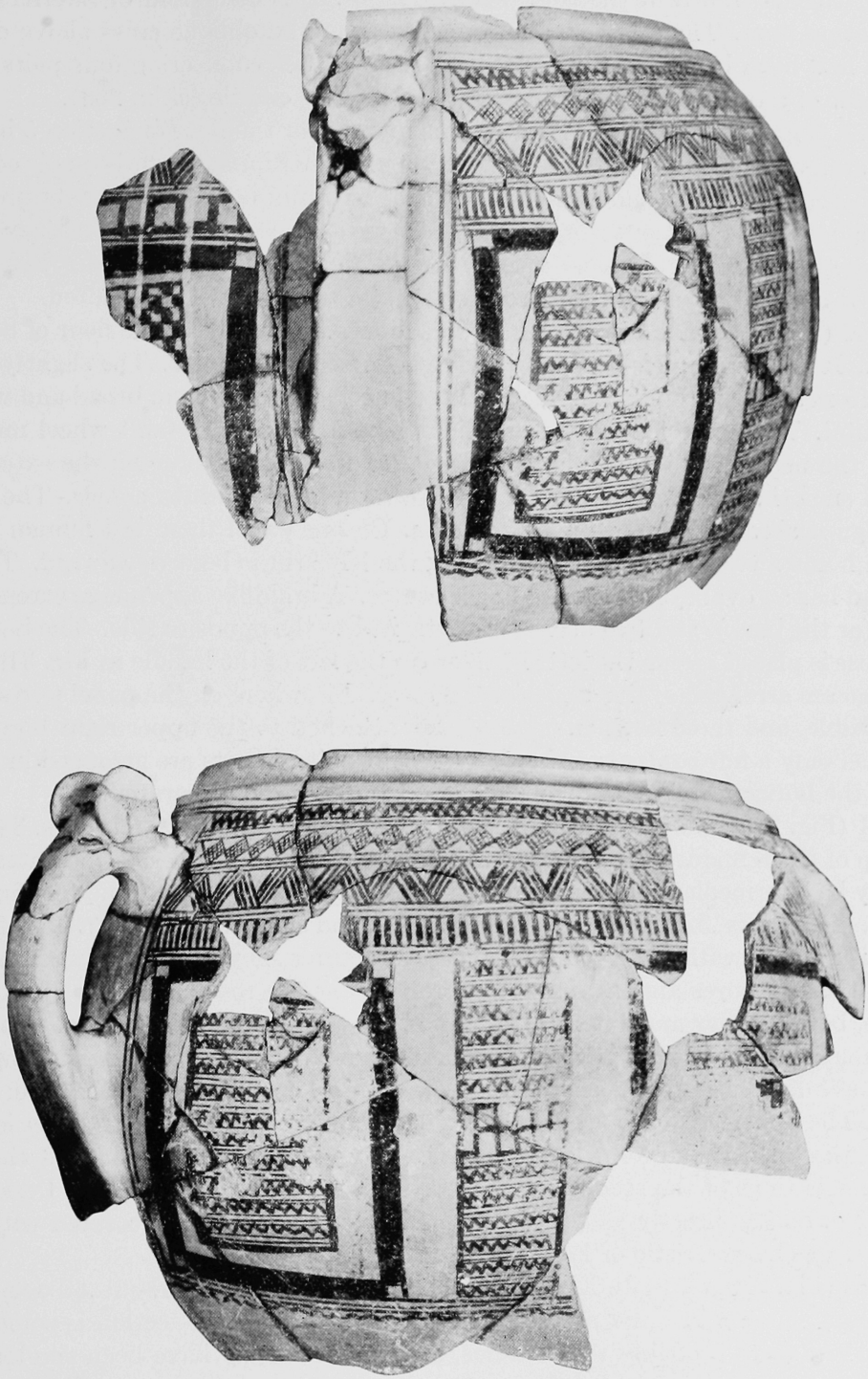

a 1058

Fig. 318.—Decorated Jar. Handle and Side Views. Scale, 3:10

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connecting band is shown in the color plate. The other is composed of alternating straight and undulating lines. There is a smaller circle inclosing an oblique cross above each handle. The vessel had been broken and mended by four lead ties connecting four pairs of holes on opposite sides of a fracture. Another crack was closed by one tie (cf. p. 268).

No. a 1058 (Fig. 318; cf. Plate XXIX B) was found near the floor of Section 5 in the Period IV citadel. This fragment of a large jar is .29 high. There may have been three handles of the typical Alişar IV band-and-double-disk form, but only one is completely preserved. Its paste is medium, with light gray core and light brown surfaces. The vessel was probably made on the wheel, though there are no wheel marks. The light brown exterior is smooth. The decoration is dark brown and brown-red; neither rim nor handles are painted.

Jar a 1050 (Fig. 319; cf. Plate XXIX B) was found .50–.70 above the floor of Section 22 in the citadel. It is .29 high. Its body must have been nearly globular. The slightly converging neck rises from a sharply offset shoulder. Of the four handles, two are broad and vertical, two are horizontal. The paste is medium and light brown. There are faint wheel marks on the interior of the neck. The interior is light brown and somewhat porous; the exterior is light brown and smooth. The decoration is dark brown on grayish white panels. The larger part of the design is abraded, but two panels remain. On one panel there is a human figure. The right hand holds a stick with a globular head; the left arm is bent downward. The lozenge-shaped head has an oval eye with a dot in the center. A braidlike appendage extends from the right side (or the back), and two dashes are attached to the opposite side. The body is trapezoid. A cross is placed beside the left shoulder (to the left of the handle in Fig. 319), and concentric rings are arranged in the angles of the cross. Elsewhere on the panel parts of quadrupeds are visible, and three hatched triangles are attached to the upper right border. On the second panel only a few concentric rings are recognizable. Others are arranged in rows above and below the horizontal handle. The neck and handles are undecorated.

Jar a 521 (Fig. 320) was found with Vessels a 512, a 259, and a 520 (cf. Figs. 331, 321, and 334) on top of the remains of the citadel wall in Plot O 13. The find-spot indicates that these vessels may be intermediate between Period IV and Period V, but this is not confirmed by the decoration. This jar is .323 high. The bottom is flat and small, suggesting a need for support. The paste is medium with small stone particles. Fractures show a light gray core and reddish surfaces. Other fractures are entirely gray, probably as the result of a fire which discolored the surface, both interior and exterior, to gray or grayish black. The original color of the exterior slip may have been light brown. The decoration is now brown to light brown, but this also may have been a different shade before the fire. The decoration attributes this jar to Period IV. The upper band of parallel lines rising from rounded triangular bases is a frequent element of Alişar IV design (cf. Plates XL, XLII, and XLIII). It is true that the relatively large concentric rings of the second band occur as late as the early phase of Period V, but a small jar (No. a 259) directly associated with the present vessel is decorated with the small concentric rings characteristic of Period IV.

Jar b 1685 (Fig. 320; cf. Plate XXVIII) was found in Plot FF 10 about .60 deep. It is .265 high. In shape it resembles the preceding vessel, though its cross-section is somewhat more biconoid. There were probably two handles, and the neck may have been similar to that of Jar a 521. The bottom is very slightly convex and would need a support. The medium paste is light brown. Some traces of a light grayish brown wash are preserved on the exterior, while the rest is light brown. The rather crude design in dark brown consists of two bands encircling the upper body, the lower band being subdivided into panels. The handle is decorated by a vertical line crossed by horizontal dashes.

Jar a 259 (Fig. 321), found with Jar a 521 in Plot O 13, is .131 high. The similarity of the

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a 1050

FIG. 319.—DECORATED JAR. SCALE, ABOUT 1:3

a 521 b 1685

FIG. 320.—DECORATED JARS. SCALE, 1:4

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two vessels suggests that they may have been made by the same potter. Jar a 259 has a flat bottom and two loop handles at opposite sides of the upper body. The paste is medium to fine and shows a gray core and thin light brown surface at the fractures. The interior is light gray. The exterior is light brown with brown and gray stains. The decoration, now shades of light brown, red-brown, and brown, may have been discolored by fire. The band of concentric rings is interrupted by the undecorated handles. An undulating line below this band and the design on the neck encircle the entire vessel.

The potsherds from large jars (Plates XXXV–XLVI) show not only design fragments but also some form details, such as rims, handles, and relief bands. There may be some sherds of smaller vessels and of zoömorphic vessels included in this series, but most of them are certainly from large jars.

The favorite stag and antelope(?) motifs are represented in Figures 322–23 and Plates XXXV and XXXVI. The animals are highly conventionalized; the muzzles, oddly elongated. The horns of the stags are marked by branchlike figures, while those of the antelopes(?) are indicated by two curved lines. In most cases the animals are accompanied by concentric circles. Wheel patterns and branches or twigs also occur.

Plates XXXV–XL illustrate the use of concentric circles or wheel symbols. Dots in the centers of many of them indicate that the perfect circles were drawn with the aid of a mechanical device. They are always employed as fill patterns. The large concentric rings shown in Plates XXXVII and XXXVIII persist in Period V. A single large scroll on Sherd 1108 (Plate XXXVII) is quite different from the Alişar III "pothooks." Sherd b 742:10 (Plate XXXVII) shows an odd design (an animal?).

The remaining sherds of large jars illustrate a variety of Alişar IV design elements and form details. Trichrome patterns are shown particularly in Plate XLI. Sherds reground to disk or tablet forms are illustrated in Plate XLVI. A section of a human figure is preserved on the perforated disk No. 356. The person holds a vessel of a form not yet found in Stratum IV.

WITH MOLDED ORNAMENTATION

Jar a 1059 (Fig. 324) was found in Section 3 of the citadel. It was about 1 meter above the floor, but it is attributed to Alişar IV. The bottom is a slightly offset flat disk. A ledge with triangular cross-section encircles the vessel near the top. One flat handle is preserved. It expands at the upper end, and there is the impression of a finger tip at the lower end. There were probably two of these handles. In addition, there is a zoömorphic handle on the center of the preserved half of the vessel. It is the head of a horned animal, the eyes marked by small holes in slightly protruding rings, the nose by two small depressions, and the mouth by a simple groove. The medium paste has a light gray core and reddish surface. Both interior and exterior have a light brown slip. The exterior is smooth. There are firing clouds on the lower body and near the rim, and brown-red stains suggest traces of a simple band decoration.

Jar a 1064 (Fig. 325) was found in fragments about 1 meter above the floor of Level 4 in Plot N 13. The more than semiglobular body rises from a flat bottom and is separated from the broad, high, contracted neck by a sharp offset. The rim is well made and has one step on the interior. Groups of four or five parallel grooves extend from a little below the shoulder to a point somewhat above the bottom. The two handles are in the form of animal heads too much conventionalized for identification. The eyes, small incised circles, are near the rim. The paste is medium, with light brown core and grayish brown surface. The interior is dark gray and shows irregular fine striations apparently left by a polishing-tool. The exterior has a dark brown slip almost black in spots. Both interior and exterior of the neck are highly polished.

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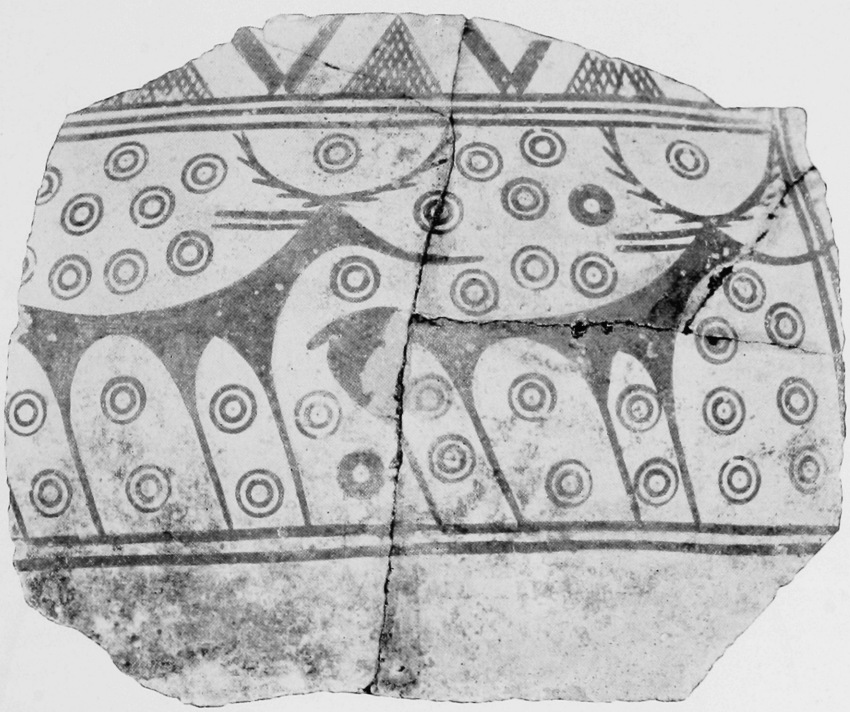
a 259

FIG. 321.—SMALL DECORATED JAR

FIG. 322.—SHERD OF A LARGE JAR



a 873

FIG. 323.—SHERDS OF A LARGE JAR

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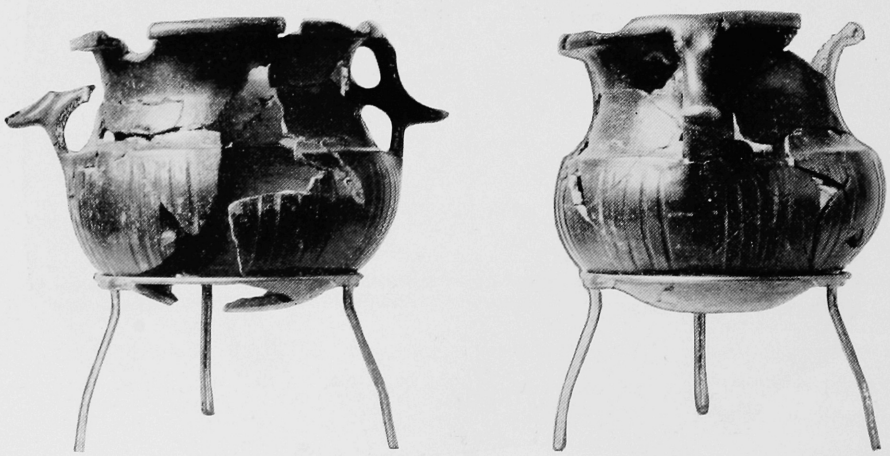
a 1059

FIG. 324.—JAR WITH ZOÖMORPHIC HANDLE. SCALE, ABOUT 1:3



a 1064

FIG. 325.—POLISHED AND FLUTED JAR. HANDLE AND SIDE VIEWS. SCALE, ABOUT 1:7

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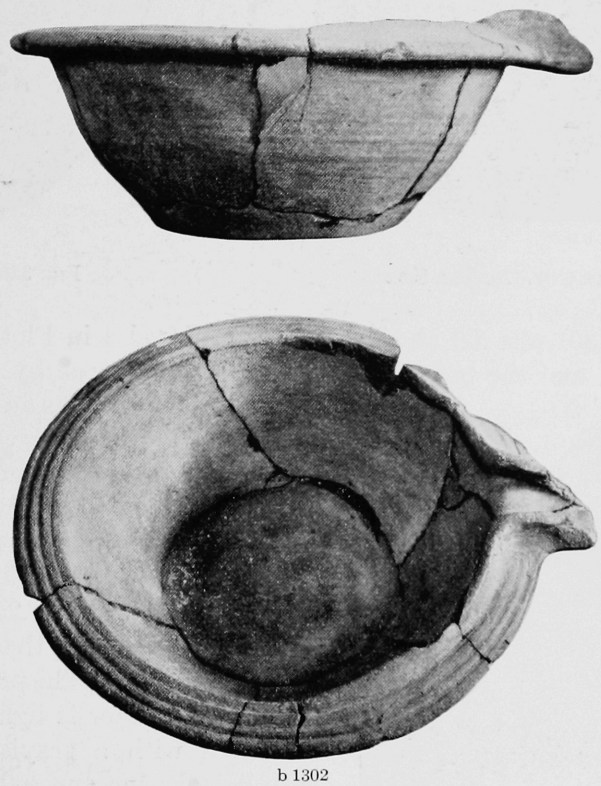
PLAIN

Bowl b 1302 (Fig. 326; cf. Plate XXVIII) was found in Plot R 6 at a depth of 2 meters, where Alişar IV sherds were mixed with Roman *terra sigillata*. The bowl is not earlier than Alişar IV, and may be later. Its form is unique. The rim is a disk raised at the inside, with four ledges on the top. The straight sides of the laterally protruding spout are continued along the inner edge of the rim. The paste is medium to coarse, with small stone particles in it. Fractures show a light grayish brown center with red-brown surfaces, originally coated with a light gray-brown wash.

Cup b 596 (Fig. 327; cf. Plate XXVIII) was found in Plot AA 16, 1.60 deep, in a layer where Alişar IV sherds prevailed. As in many other cases, decorated sherds were the only clues for



b 1302

FIG. 326.—PLAIN BOWL. SIDE AND TOP VIEWS. SCALE, 1:6

the period to which the vessel is attributed. The bottom is a solid flat foot .009 thick. One handle, now broken, extended from the lip to the center of the body. The medium paste is gray, with grayish black surface.

Pitcher a 516 (Fig. 328) was uncovered in a partly excavated room behind the citadel wall in Plot N 10.[1] It is .112 high. The crude pot seems to be handmade. The missing handle was probably raised above the lip, and the spout probably rose from the tubular neck. The paste is medium and gray-brown. The interior of the body is light gray. The interior of the neck and the exterior were coated with a light brown-red slip which is now almost chipped off, showing the grayish brown base.

Pitcher a 638 (Fig. 329) was found on the floor of the partly excavated room of Level 4 in N 13. It is .122 high. Its broken neck seems to end in a clover-leaf orifice to which the single

[1] The chief excavations in this plot were made in 1927 and are not shown in Fig. 277.

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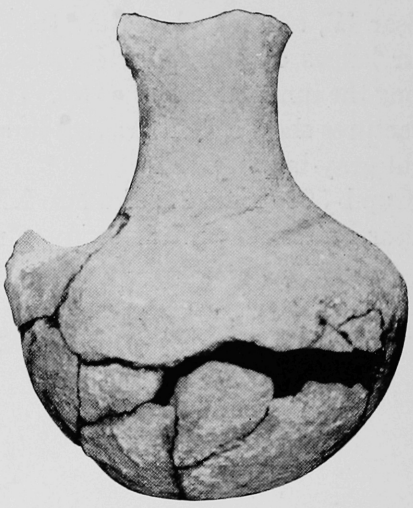
handle was attached. Its paste is medium, with a light gray core and grayish brown surfaces. There is a light buff slip over a brown base on the upper part of the exterior. The remainder of the exterior and the interior are brown.

b 596

FIG. 327.—PLAIN CUP. ACTUAL SIZE



a 516

FIG. 328.—PLAIN PITCHER

Pitcher a 641 (Fig. 330) was .50 above the floor of Level 4 in Plot N 13. It is .205 high. The bottom is missing, and the body is separated from the neck by a low ridge. From the clover-leaf orifice rises an elevated handle which has a sharp outside curve. The medium to fine paste has a gray core and light brown surfaces. The interior is light brown; the smooth, almost polished, exterior is a somewhat darker shade.

a 638

FIG. 329.—PLAIN PITCHER. SCALE, 2:3

Pitcher a 1049 (Fig. 330) was found high in Section 22. It is about .235 high. The bottom is small and flat, and the handle rises above a clover-leaf orifice. The paste is medium and reddish. The interior is light brown. The exterior is coated with a grayish white slip or wash with light brown and reddish stains.

Pitcher a 1055 (Fig. 330) was in the refuse layer above Section 15 of Level 4 and flush with Pavement 18*a*. The neck, which ends in a clover-leaf orifice, is separated from the body by a low ridge. The lateral edges of the handle are pointed. The paste is medium and reddish. The interior has a reddish tint, and the exterior is light brown with reddish stains.

Pitcher a 512 (Fig. 331) was found with the decorated Jars a 259 and a 521 (cf. Fig. 321 and Fig. 320) above the citadel wall in Plot O 13. It is .335 high, larger than the vessels of the same type which have been described. Its bottom is flat and slightly concave. One handle was attached to the clover-leaf orifice. Its paste is medium, with a gray core and reddish surfaces. Interior and exterior are light brown, with black stains on the exterior.

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Vessel b 679 (Fig. 332; cf. Plate XXVIII) may be called a pitcher rather than a jar. It was found in Plot Y 7 at 1.40–1.60 depth. Alişar IV sherds prevailed in the find-layer, but

a 641 a 1049 a 1055

Fig. 330.—Plain Pitchers. Scale of No. a 1049, about 1:5; of the Others, about 1:4

it is not certain that the vessel is of Alişar IV origin. One handle, now broken, extended from the center of the body to the lip. The medium to fine paste is gray. The surfaces are dark gray, and both interior and exterior are polished at the rim.

A small cooking-jar, No. a 1051 (Fig. 333), was found in Section 25 at a depth corresponding approximately to that of the base of Wall 25*c*. It is .125 high. Its bottom is flat, and one handle extended from the lip to the center of the body.

a 512

Fig. 331.—Plain Pitcher. Scale, 1:4

b 679

Fig. 332.—Small Pitcher. Handle View. Scale, 1:2

The medium paste has a light brown core and gray surface. Both interior and exterior have a dark brown slip stained grayish black in many spots by use over a fire. There is some powdered mica on the exterior.

Cooking-jar a 1053 (Fig. 333) occurred in Section 19 of Level 4, below the rock pile 1*a*.

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It is .176 high. The missing bottom was probably flat. The outer curve of the handle is slightly concave, and there is the impression of a finger tip at the lower end. The medium paste of one half of the jar is reddish with a gray interior surface; that of the other half, entirely gray. The

Fig. 333.—Cooking-Jars. Scale, about 1:3

slip on both exterior and interior, originally brown with some powdered mica, had been stained gray or grayish black by use over a fire.

Cooking-jar a 1056 (Fig. 333) was found in Section 17 on the floor at the level of the bases of Walls 17*a* and 17*b*. It is .142 high. Its body is almost globular with a round bottom. The paste is medium, brown with grayish black surface. The slip on both exterior and interior, originally brown with powdered mica, had been blackened by use over fire.

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Cooking-jar a 133 (Fig. 333) was found in the upper level of Section 17, associated with Jars a 131 and a 132 (cf. pp. 242 and 244). The bottom is slightly flattened. Two small handles were at opposite sides of the body, which narrowed into a relatively high neck. The paste is medium and reddish. The interior is light gray; the exterior was red-brown, now discolored by use over fire.

Jar a 520 (Fig. 334; cf. Plate XXIX B) was found near the decorated Vessels a 512 and a 521 in Plot O 13 (cf. pp. 246 and 252), and therefore it is attributed to Period IV. It is .298 high and has a medium, gray paste. The interior is grayish black, turning to light gray toward the top. The exterior shows shades of red-brown, light gray, and grayish black resulting from the fire, which had discolored it and other vessels found near by. Both surfaces show powdered mica.[1]

a 520

Fig. 334.—Large Plain Jar. Scale, about 1:4

Jar 976 (Fig. 335) is one of four large storage vessels of almost identical shape found in Section 4 of Level 4 in 1927 (cf. Fig. 286). They stood in depressions in the floor and may have been used for the storage of water or grain. This is the largest type of vessel found in Stratum IV. Like most Period IV vessels these storage jars were wheelmade. Jar 976 is 1.24 high. It is .25 wide at the bottom, .91 through the body, and .54 at the rim. The bottom is .03 thick, the body .018 to .02, and the neck .02. At the point of greatest diameter a rib with semicircular cross-section encircles the vessel, strengthening the wall. At four points this rib broadens into long horizontal handles. The short neck ends in a broad, flat disk rim. At the bottom a small foot protrudes about .01. The paste is medium, with light brown core and reddish surface which extends deeper on the exterior than on the interior. Small stone particles were observed in the paste. The interior is light brown; the rather smooth exterior is light grayish brown with buff and reddish areas.

Storage jar No. a 1069 (Fig. 335) is 1.325 high. It is .25 wide at the bottom, .915 through the body, and .56 at the rim. The bottom is .03 thick, the wall .015–.017, and the neck .022. This jar has two supporting ribs .25 apart. The four handles are extensions of the lower rib. The

[1] This vessel form persisted until a much later period, as shown by a vessel uncovered in the city on Kerkenes Dağ, a site which may correspond in time to the second half of Alişar V. See E. F. Schmidt in *AJSL* XLV 261.

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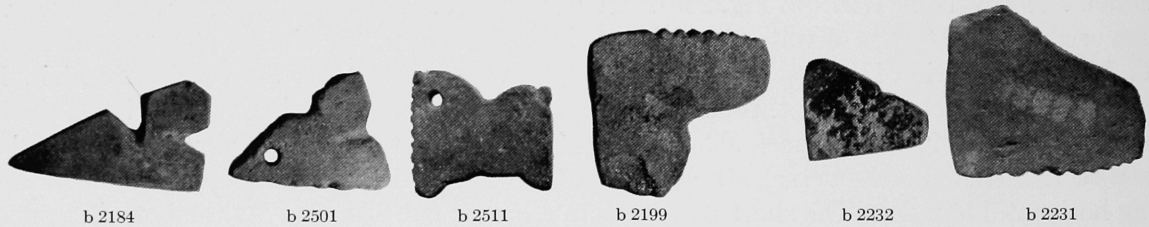
medium paste contains small stone particles; it is reddish, with light brown surface in some areas. The interior and exterior of the jar are like those of Jar 976.

a 1069 976

Fig. 335.—Storage Jars. Scale, about 1:15

WROUGHT SHERDS

We found a number of sherds which had been reground to odd shapes, in some cases resembling animals (cf. sherds reground to disks, p. 248 and Plate XLVI). Some are perforated for suspension; serrated edges are relatively common. The surfaces of the sherds shown in Figure 336 are as follows: b 2184, smooth, light grayish brown; b 2501, smooth, light brown



b 2184 b 2501 b 2511 b 2199 b 2232 b 2231

Fig. 336.—Potsherds Reground to Odd Shapes. Scale, 1:2

on one side and light grayish brown on the other; b 2511, smooth, light brown; b 2199, granular, light brown; b 2232, smooth, dark gray on one side, light red-brown on the other; b 2231, light brown-red and light brown with mica. Sherds b 2184, b 2199, b 2231, and b 2232 occurred in Plots DD–EE 10, in a layer where Alişar II and Alişar IV objects were mixed. They cannot belong to Periods I or III. Although Sherd b 2199 resembles Period II ware, the fact that none of these oddly shaped sherds was definitely associated with the extensive Alişar II buildings eliminates Period II also. There remain Alişar IV and Alişar V. To judge

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from the technique, the sherds might belong to either one; but none appeared during the excavation of Alişar V on Mounds B, C, and D. Thus Alişar IV is most plausible as the period of origin of these four specimens. Sherd b 2501 was found in the definite Stratum IV of Plot YY 26. Sherd b 2511 was uncovered in Plot J 33 in the find-level of Jar b 2542, a typical Period IV vessel (cf. p. 244).[1]

MISCELLANEOUS OBJECTS

The oval loom weights (Fig. 337) Nos. a 867 and a 872 are of gray clay. No. a 1106, also of gray clay, is elliptical. No. a 668 is of pottery. The light red-brown paste is of medium quality, and the gray-brown surface is somewhat rough. Its shape is trapezoid. Since trapezoid weights were typical in Stratum V, whereas the specimen found in Stratum III was oval, it appears that during Period IV the usual shape of loom weights changed from oval to trapezoid.

Large crude rings of pottery and clay (Fig. 338) occur in all strata, and sometimes several of them are found together. No. b 2616 is of light gray pottery, rather well fired and smooth. No. b 2617 is a large pottery tube with granular light gray and light red-brown surface. No. b 2464 is a ring of crude gray clay very slightly fired. Nos. b 2616 and b 2617 may have been used as spindle whorls.

Fig. 337.—Loom Weights of Pottery. Scale, 1:5

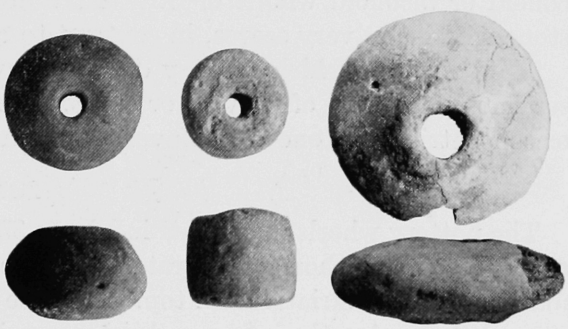

Fig. 338.—Large Rings of Pottery or Clay. Scale, 2:5

Pottery spindle whorls are described on page 258; a pottery figurine fragment, on page 261.

SUMMARY

A comparison of the technique, form, and decoration of the pottery of Alişar III and Alişar IV shows a much more pronounced break between these periods than the change which took place from Alişar I to Alişar III. The wheelmade pottery of Period IV contrasts with the handmade vessels of Period III; few features of the older forms survived; and the decoration of the later ware added many new elements, becoming more elastic and as a rule more delicate.

The similarity of Alişar IV pottery to the bulk of that found at Boğaz Köy has been mentioned (cf. p. 213). Sherds of Alişar IV type are present on the surfaces of many other mounds in Cappadocia. We saw such sherds on the mound of Kül Tepe and on the tablet field near by. De Genouillac illustrates at least two Alişar IV sherds from Kül Tepe. The sherds illustrated by H. Grothe[2] from Kül Tepe, from Seresek, and from the tumulus in the Elbistan plain seem to be of older date. At Gordium, however, a typical Alişar IV vessel was found in Tumulus III.[3] It was associated with vessels delicately decorated and with strainer bill-spouts. Some

[1] A similar sherd, No. 2994, was found in 1927 closely associated with Period IV material in Plot U 13–14 (Plot XXVIII of 1927), and other specimens occurred in mixed layers.

[2] *Meine Vorderasien-Expedition 1906 u. 1907* I cclxxxxi f., Plates XV–XIX, Plate 2, No. 9821*a*, and Plate 19, No. 9849. See also in the same volume L. Curtius, "Kleine Funde aus Kleinasien," pp. ccxxv f.

[3] G. and A. Körte, *Gordion*, p. 59, Abb. 25. Cf. *OIP* VI, Plate I 3239.

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sherds and spouts of this type, found at Alişar, we have attributed to Alişar IV.[1] Frankfort[2] gives reason to attribute the finds of Tumulus III to the end of the second millennium, although Körte dates them about 800 B.C. The question is still unsolved. If the Gordium vessels do not belong to the end of the Hittite Empire period, the forms and decorations of that period persisted until considerably later times.

Typical Alişar IV vessels occur in North Syria, as illustrated most strikingly by a cup from Carchemish.[3] Here it may be mentioned that Frankfort traces the frequent Alişar IV pattern of concentric rings from Syria to Asia Minor.[4]

SPINDLE WHORLS

The great importance of spindle whorls as guide fossils is again emphasized by the Alişar IV specimens. The typical concavo-convex pottery whorls of Stratum III and the equally typical conoid or biconoid whorls of Stratum V are very rare in Stratum IV. As in Stratum III, stone whorls are very scarce, in contrast to Stratum I and Stratum V.

The only type which we may designate as characteristic of Alişar IV is a relatively large semiglobular whorl of pottery or stone. The pottery specimens are ornamented with single or concentric rings, one of the favorite ornamental elements of the pottery of this period.

POTTERY

The pottery whorls illustrated in Figure 339 were found in the Alişar IV citadel. The typical semiglobular whorl is illustrated by three specimens. No. a 667 is gray and smooth, with many horizontal striations on top. The base is ornamented with a ring of small single circles around the perforation, surrounded by a series of large concentric circles. No. a 921 is gray-brown and smooth. The broken base is ornamented with single circles, a dot in the center of each indicating that they were drawn with a mechanical device. No. a 923 is gray and smooth. The broken base is ornamented with three or four incised circles, each with a depression in the center.

A number of specimens from other strata had intruded into this stratum. The small biconoid Whorls a 595, a 242, a 707, and a 610 belong to Stratum V. The concavo-convex Whorls a 749 and a 778 had intruded from Stratum III. Whorl a 693 is an Alişar I object which somehow found its way to the much higher level.

The other forms illustrated in Figure 339 are such as are found in all strata. Those with elliptical cross-section are Nos. a 989, light brown, crude, irregular; a 1120, light brown, smooth; a 1113, dark gray, rough; a 720, somewhat biconoid, gray-brown, smooth; a 758, gray-brown, rough, stippled; a 918, gray, rough; a 887, somewhat biconoid, gray-brown, rough; a 1047, gray, somewhat rough; a 888, gray, rough; and a 691, red-brown, smooth. The following are biconoid: Nos. a 605, gray, crude, rough; a 738, gray-brown, smooth; a 914, gray-brown, smooth; and a 742, gray-brown, somewhat rough, and split. Two are conoid: Nos. a 692, gray and smooth, and a 733, gray and rough. Two are discoid: Nos. a 1040, gray and granular, and a 607, light gray, with two incised circles and the rim and center raised. No. a 635, gray-brown, rough, and irregular, is globular in form. Pottery rings which may have been used as spindle whorls have been described on page 257.

STONE

Stone whorls (Fig. 340) were rare in Stratum IV. Most of them were of burned limestone(?), in some cases hardly distinguishable from pottery with fine paste. The relatively large semiglobular form characteristic of the pottery whorls of Stratum IV seems to be typical of the

[1] Other such pieces were found in Stratum V on Mound A and also on Mounds B, C, and D.

[2] *Studies in Early Pottery of the Near East* II 158. [3] *Ibid.* p. 162, Fig. 18. [4] *Ibid.* p. 164.

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stone whorls also. Semiglobular stone whorls are Nos. a 890, burned limestone(?), grayish white and light brown, with clusters of excrescences; a 920, burned limestone(?), somewhat flattened, grayish white; b 669, burned limestone(?), somewhat conoid, gray, smooth, with the

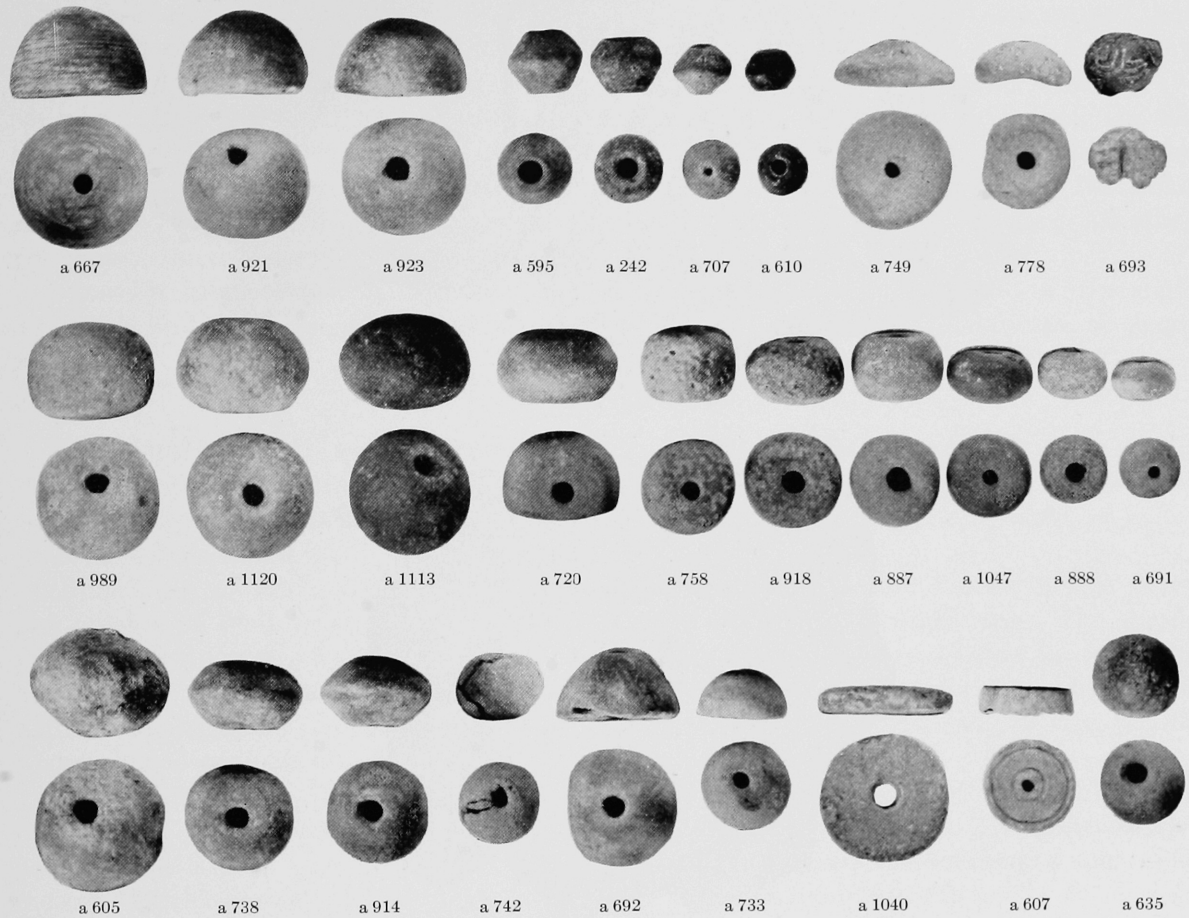

FIG. 339.—POTTERY SPINDLE WHORLS. SCALE, ABOUT 2:5

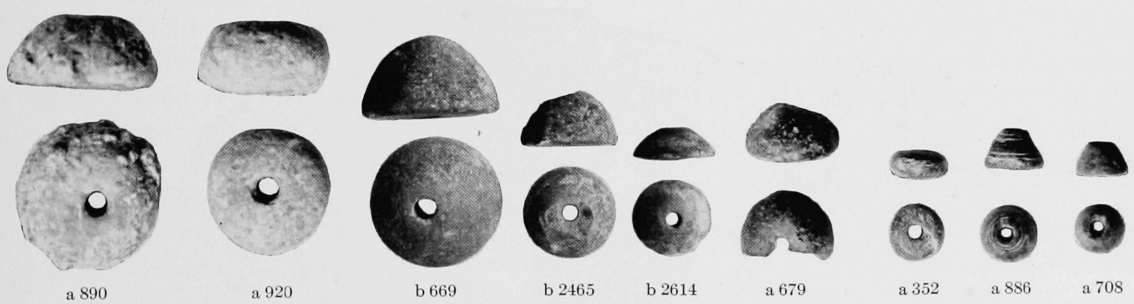

FIG. 340.—STONE SPINDLE WHORLS. SCALE, 2:5

perforation off center; b 2465, burned limestone(?), top battered, light gray, smooth; a 679, serpentine, irregular, somewhat conoid, purplish brown. No. b 2614, of burned limestone, is convexly conoid, light grayish green, and smooth; the base is battered. No. a 352 is a disk of gray serpentine. Nos. a 886 and a 708 are small conical whorls of Alişar V origin.

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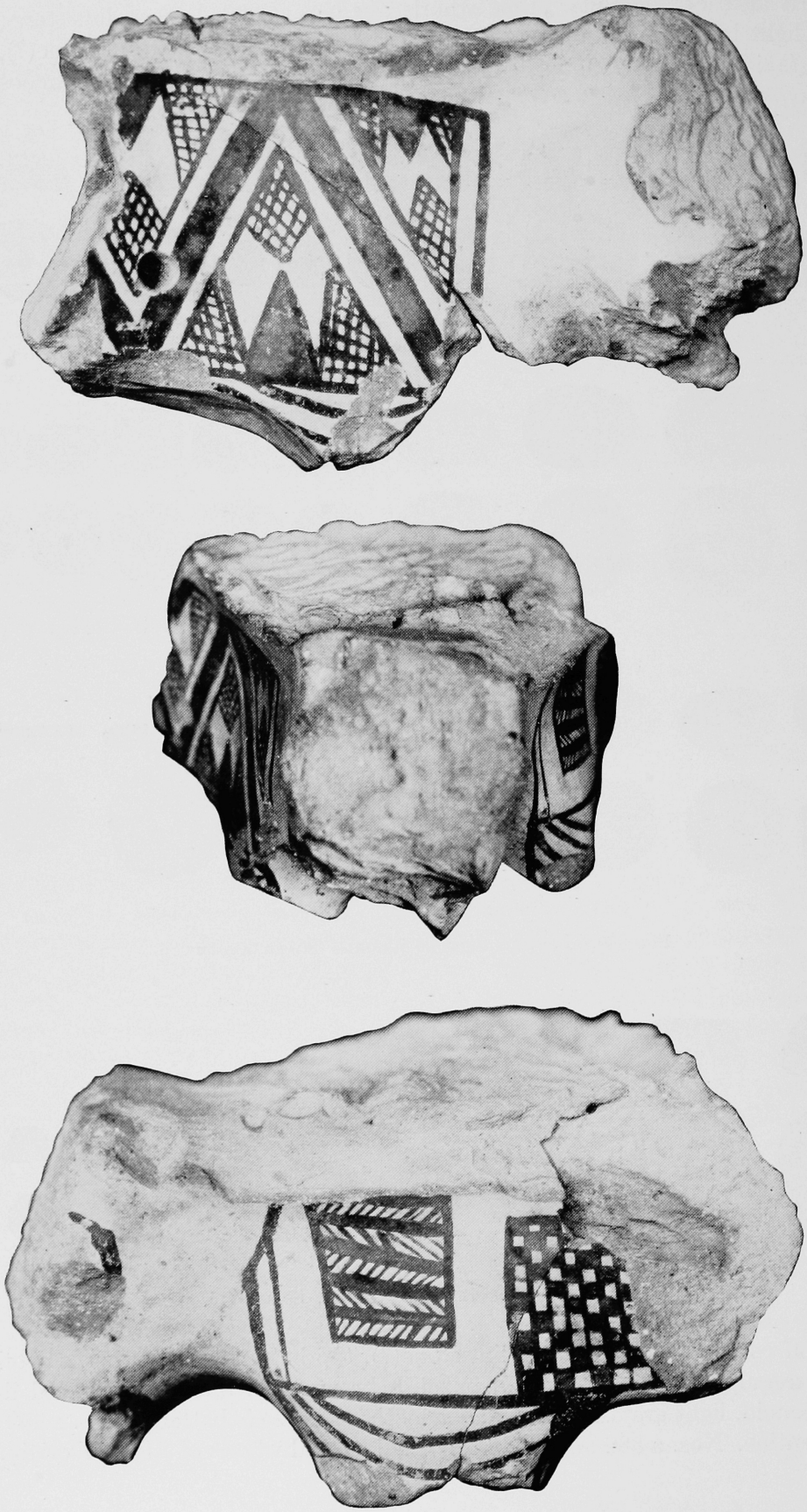

a 612

Fig. 341.—Decorated Pottery Figurine. Right Side, Front, and Left Side

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FIGURINES

Fragment a 612 (Fig. 341) probably represents an animal, presumably a quadruped. The fragment is .096 long, .053 high, and .082 broad. It apparently represents parts of the head, of the forelegs, and of the anterior body. Perforations through various sections suggest that it was built up around a skeleton of sticks. The paste is medium to fine, with light gray core turning light brown toward the edges. The surface is smooth and coated with a grayish white slip, on which the decoration is applied in dark brown and red-brown. On the head, parts of dark brown circles seem to mark the eyes; red-brown bands are visible at the corners of the broken mouth. On either side of the body is a panel. On the right side the broad zigzag band and the small solid triangles are red-brown with dark brown borders. All other portions of the decoration are dark brown.

A possibly zoömorphic bowl was described on pages 242 f.; animal forms used as ornaments on vessels have been described on page 248; wrought sherds, some in animal form, on pages 256–57.

SEALS

The typical Alişar IV seals are circular "bullae," with "Hittite hieroglyphic" inscriptions or other symbols, and scaraboids. An imported Egyptian scarab also occurred in this stratum. All Alişar IV seals are made of stone (serpentine) or frit. No pottery, bone, or metal seals have been found.[1]

"Bulla" (or amulet?) a 385 (Fig. 342) was found in a black refuse deposit in Plot M 14 just outside of Wall 1*h* of the Alişar IV citadel and .50 below its upper edge. The sherds in the find-layer were Alişar IV, though the top of Stratum III was not far below the find-spot (cf. pp. 20 f.). The serpentine disk has somewhat convex sides and a perforation .007 across. "Hittite hieroglyphic" legends, almost alike, are incised on both sides. On one surface two wedge-shaped symbols are added.

"Bulla" b 571 (Fig. 343) occurred in Plot AA 16 at a depth of 1.00–1.30. Period IV sherds prevailed in the find-layer, and no sherds of older periods were found. The polished serpentine disk is dark brown with reddish shades. Two faint grooves encircle the edge. The incised "Hittite hieroglyphic" legends do not seem to be alike on both sides. The larger part of one surface has been destroyed. The inscription on the preserved face is apparently written in boustrophedon fashion.

"Bulla" b 2675 (Fig. 344) appeared in Plot YY 26 (cf. pp. 237 f.) at the very base of the high Wall 1*a*, in the bottom refuse of Stratum IV, which was here superimposed on Stratum II. The polished serpentine disk is dark brown with a slightly reddish shade. There is a short legend in a central circle on each face. On one face the inscription is inclosed by a band of antlers; on the opposite side the legend is encircled by two concentric bands, the inner one filled with a blossom(?) pattern and the outer one with a series of oblique dashes.[2]

"Bulla"(?) b 2225 (Fig. 345), occurring in a mixed Alişar IV and Alişar II layer in Plots DD–EE 10, is attributed to Period IV because of its shape. The irregular, polished disk is of grayish black serpentine. Both faces are convex, and faint grooves encircle the edge. The designs seem to be alike on both faces, though the abraded centers do not permit identification. There seem to be two quadrupeds, back to back, and three or four cross-shaped elements (birds?).[3]

[1] Stone seal No. b 586 (cf. p. 57) was found in Stratum IV, but there seems to be no doubt that it originated in Period I.

[2] Dr. Ignace Gelb points out that the legends on this "bulla" seem to be primitive linear symbols, not Hittite, while the decorative designs resemble Cretan elements. Cf. Sir Arthur Evans, *Scripta Minoa* I (Oxford: Clarendon Press, 1909).

[3] For "Bullae" 3095, 3099, and 3100, found in 1927, see *OIP* VII 47.

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Scaraboid a 736 (Fig. 345) was found in Plot P 13 among the rocks of the Alişar IV citadel wall (cf. p. 227). This serpentine seal with simplified scarab back is perforated through its long axis. The sealing design is somewhat obscure. It may represent a warrior with scale armor, holding a weapon above his head with one hand and a shield with the other hand. An irregular line incloses the pattern.

a 385

FIG. 342.—"BULLA" WITH "HITTITE HIEROGLYPHIC" LEGEND AND MODERN IMPRESSIONS OF EACH SIDE. ACTUAL SIZE

b 571

FIG. 343.—"BULLA" WITH "HITTITE HIEROGLYPHIC" LEGEND. ACTUAL SIZE

b 2675

FIG. 344.—"BULLA" WITH "HITTITE HIEROGLYPHIC"(?) LEGEND. ACTUAL SIZE. DRAWINGS OF EACH SIDE. SCALE, 2:1

Scaraboid b 819 (Fig. 345) occurred in a mixed layer in Plot X 19 at a depth of 3.60–3.80. Alişar II sherds actually prevailed, and there were also many Alişar I sherds; but some Alişar IV pottery was found, and one *terra sigillata* sherd. We attributed the scaraboid to Alişar IV on account of its form. It is made of grayish green serpentine with polished surface. The irregular oval has a flat base and a plain conoid top, with a perforation through the long axis. The sealing design represents a crudely drawn animal (stag?) with a roughly triangular element (bird?) above its back.

Scaraboid a 858 (Fig. 345) was apparently associated with the structural remains between Levels 3 and 4 in Plot M 12. It may therefore belong to the end of Period IV or to the early phase of Period V. It is of greenish frit. Its flat base is a rectangle with rounded corners,

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and its top is convex. A perforation extends through the long axis. The sealing design shows two paired diagonals crossed by a third pair of lines. There is a cross of paired lines on the back and two more lines at the edge.

An Egyptian scarab, No. b 611 (Fig. 346), was found in Plot X 19 at a depth of 1.70 where Alişar IV sherds prevailed. There were also some Alişar V sherds and some *terra sigillata*

b 2225 a 736 b 819 a 858

FIG. 345.—"BULLA"(?) AND SCARABOIDS. ACTUAL SIZE

b 611

FIG. 346.—EGYPTIAN SCARAB. PHOTOGRAPHS AND DRAWINGS, ACTUAL SIZE. DRAWING OF DESIGN ON THE BASE. SCALE, 3:1

fragments. We attributed the scarab to Period IV. Dr. T. George Allen, of the Oriental Institute, states that "the back of the scarab fixes its date in general to the period between 1400 and 1200 B.C. The design shows in the center Horus as a falcon wearing the double crown (made by combining those of Upper and Lower Egypt). Before the falcon stands the sign of 'life,' and behind him is a cobra (the *uraeus*-serpent) wearing the crown of Lower Egypt. The serpent probably represents the Delta goddess Uto (often called Buto)." The scarab, of smooth burned limestone, is perforated through the long axis. Its surface is grayish white with light yellowish brown stains.

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METAL OBJECTS

Iron appeared for the first time in Stratum IV, marking the initial phase of the Iron Age in the territory under consideration. Bronze, copper, and lead also were still in use.

Most types of metal objects which we know from the preceding periods are represented in Stratum IV (cf. p. 30, n. 3). New types include weapon heads[1] and miscellaneous objects of both bronze or copper and iron. Fibulae of both those metals are typical of Period IV.[2] Lead ties for repairing pots came into use.

The series of bronze or copper objects includes spindle-shaped and spatulate points, socketed points, weapon heads, socketed celts, a chisel, needles, bracelets, rings, fibulae, pins, and miscellaneous objects.

Lead is represented by small rings and by the repairing-ties.

Iron objects are spearheads and arrowheads, blades, rings, a fibula, etc.

COPPER OR BRONZE

Only a few spindle-shaped and spatulate points of copper or bronze (Fig. 347) were discovered in Stratum IV. They appear to be most frequent in Stratum II and Stratum I. Nos. b 2629 (.0045 square) and b 632 (.0035 square) are typical spindle-shaped points with one end flattened. No. b 391 has a somewhat spatulate end and a round shaft. No. b 633 may

FIG. 347.—SPINDLE-SHAPED AND SPATULATE POINTS AND A SOCKETED POINT OF BRONZE OR COPPER. ACTUAL SIZE

be a fragment of a different tool. It has an almost circular cross-section (.0045 in diameter), and it shows the remainder of a perforation at the broken end. No. a 1021 (not illustrated) has a rectangular cross-section.

No. b 2646 (Fig. 347) was probably a socketed point. We have only the rolled part, containing the charred remains of a wooden shaft.

Weapon points of distinctive form (Fig. 348) begin to be common in Stratum IV, though

[1] A single arrowhead was found in Stratum II; cf. p. 151.

[2] A single specimen was found in Stratum III; cf. p. 208.

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isolated specimens were found in Stratum II (cf. pp. 151 f.). Spearhead a 561 has a triangular blade and a long tang with rectangular cross-section. The central rib of the blade is elevated.

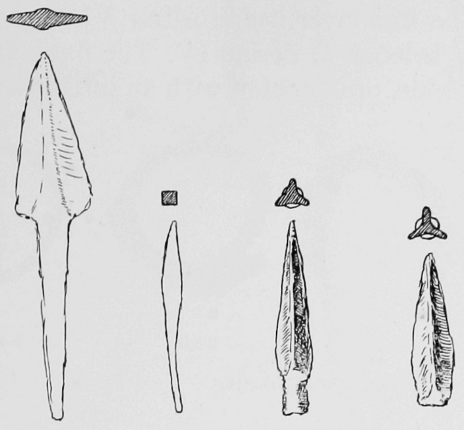

FIG. 348.—SPEARHEAD AND ARROWHEADS OF BRONZE OR COPPER. SCALE, 1:2

FIG. 349.—SOCKETED CELT AND CHISEL OF BRONZE OR COPPER. ACTUAL SIZE

Arrowheads a 780 and a 220 are of a type which appears in Stratum IV for the first time and persists at least until the late phase of Period V. It has a fluted triangular cross-section and socket. No. a 889 is a small spindle-shaped point well adapted for use as an arrowhead —a type such as occurred from the oldest stratum on.

A celt with rolled socket shaft, No. b 658 (Fig. 349), was found in Plot X 19, 2.40–2.60 deep. Period IV sherds prevailed; but some sherds of Period II, of Period III, and even of

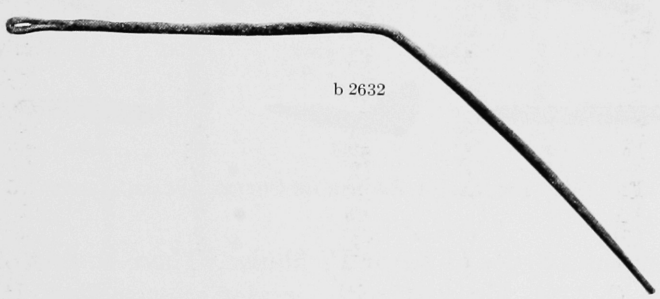

FIG. 350.—NEEDLE OF BRONZE OR COPPER. ACTUAL SIZE

Period V were found. Celt b 658 may be of Period II origin, for socketed celts are relatively frequent in that stratum.

Chisel b 726 (Fig. 349) is wedge-shaped, with almost square head. The edge has been turned by pounding.

The needle, introduced in Period II, was fully adopted in Period IV (e.g., No. b 2632, Fig. 350). As in Period II, the eye apparently was made by bending over the end.

One half of a plain bracelet was found (No. a 627, not illustrated). Its diameter is .0575, and it is .0025 thick.

Ring a 449, probably a finger ring, is .023 in diameter. It has a triangular cross-section. Ring a 590, .023 in diameter, is a flat band .008 broad. (These two are not illustrated.)

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Of those illustrated in Figure 351, Rings b 2600 and b 2672 have oval cross-sections, each .0025×.0015. Ring b 2672 overlaps slightly on beveled ends. Rings b 1027, b 783, and b 668 have circular cross-sections. The ends of No. b 668 overlap .017. No. b 1985 was a more pretentious ring. It occurred in Plot DD 10 in a layer directly below buildings of Period VI or later. Though Alişar IV sherds prevailed in the find-layer, some Alişar VI *terra sigillata* was present. Hence we are not sure that this ring belongs to Period IV. The flat ring (.0015 thick, .003 broad) broadens to a circular bezel .01 wide, ornamented with an incised square.

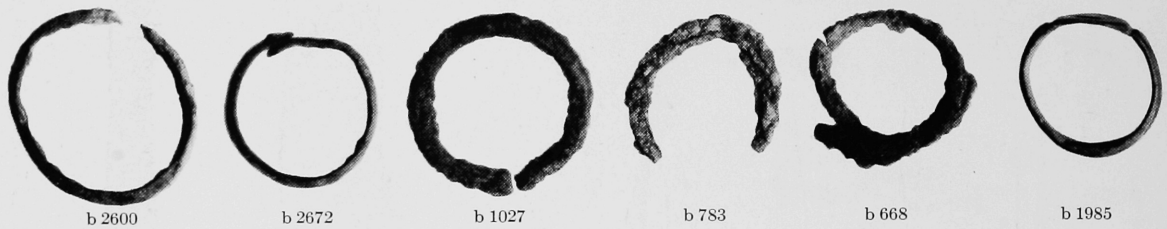

Fig. 351.—Rings of Bronze or Copper. Actual Size

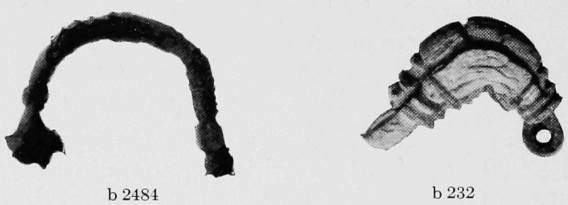

Fig. 352.—Fibulae of Bronze or Copper. Actual Size

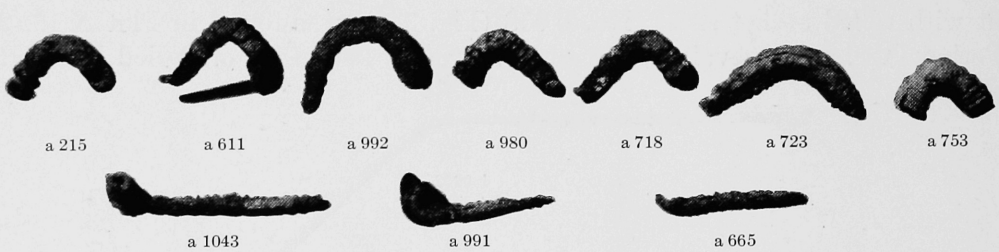

Fig. 353.—Fibulae of Bronze or Copper. Scale, about 3:5

We may distinguish three types of Alişar IV fibulae. There is, first of all, a plain, roughly semicircular specimen (b 2484, Fig. 352) with circular cross-section. It resembles the fibula found in Stratum III.

A second type is illustrated by Nos. a 215 and a 611 (Fig. 353). The bow has a rectangular cross-section and is bent at about the center of the span. Fibula a 611 is the only specimen of this series which retains the pin. The point of attachment is illustrated by Pins a 1043 and a 991.

The third type is represented by Fibulae a 992, a 980, a 718, a 723, and a 753, shown in Figure 353, and by No. b 232 in Figure 352. The cross-sections of these clasps are circular, and they seem to be bent not at the center of the span but nearer to one end, usually the end where the pin is attached. No. b 232 (Fig. 352) illustrates the usual type of ornamentation and the ring for the attachment of the pin.

As a whole, the Alişar IV pins (Figs. 354–55) cannot be distinguished from those of the preceding periods. It may be that a chemical analysis would show a different alloy. Vertical

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b 601 b 565 b 724 b 2630 b 2625 b 2722 b 1109 b 1368

FIG. 354.—PINS OF BRONZE OR COPPER. ACTUAL SIZE

b 631 b 2621 b 2670 b 2622 b 686 b 2662

FIG. 355.—PINS OF BRONZE OR COPPER. ACTUAL SIZE

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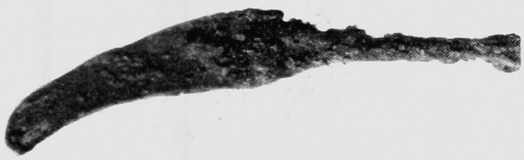
spool-shaped heads seem to be typical for Period IV. They have not been found in any earlier stratum.

The following pin types are represented, classified according to their head forms: globular, No. b 601; ovate, not illustrated; semiglobular, not illustrated; conical, Nos. b 565 and b 724; inverted conical, not illustrated; pyramidal, No. b 2630; pear-shaped, No. b 2625, with a fragment of the shaft preserved in the perforated head of black glazed frit (fayence?); vertical spool, Nos. b 2722, b 1109, and b 1368. No. b 2722 was associated with low Alişar IV refuse in Plot M 13. The other two pins occurred in mixed Alişar IV and Alişar II layers. Both are ornamented with grooves encircling the upper part of the shaft. Other head forms are: discoid with undefinable form details, not illustrated; concavely discoid, Nos. b 631 and b 2621; scalloped discoid, No. b 2670, with twelve scallops and with centers of top and bottom recessed; plano-convex, No. b 2622; and coiled, Nos. b 686 and b 2662. Pin a 623 (not illustrated) is very elaborate. Its head is a globe inlaid with iron at the center and surmounted by a projection which may have been the setting for a bead. There are also some heavily oxidized and fragmentary heads which are undefinable.



b 2667

Fig. 356.—Small Blade of Bronze or Copper. Actual Size

a 663 a 560

Fig. 357.—Tack and Miniature Pickax of Bronze or Copper

From a 131

b 2661 b 1020 b 676 b 2671

Fig. 358.—Repairing Ties and Rings of Lead. Actual Size

No. b 2667 (Fig. 356) is a small curved blade (.001 thick) with a handle rolled at the end.

No. a 663 (Fig. 357) is a tack with semiglobular head.

No. a 560 (Fig. 357) resembles a miniature pickax, its blade perforated to admit a handle with coiled end.

LEAD

Tie b 2661 (Fig. 358) is an example of a lead device the use of which for repairing cracked vessels is proved by its occurrence on several mended pots. The original shape is shown by the drawing of a tie from Jar a 131.

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We may assume that the lead rings found in Stratum IV (Fig. 358) were used as small change, like similar rings in Stratum II and Stratum III. It appears that they were kept in the form of chains, as some are still linked together.

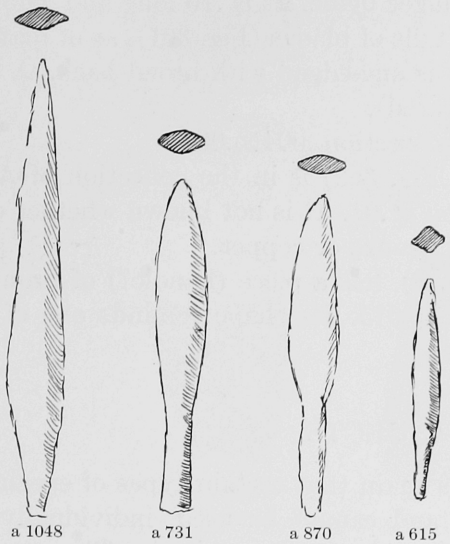

FIG. 359.—SPEAR AND ARROW POINTS OF IRON. SCALE, 1:2

FIG. 360.—DAGGER(?) BLADE OF IRON. SCALE, ABOUT 1:2

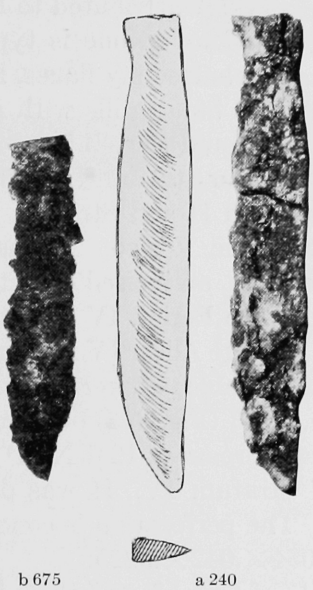

FIG. 361.—IRON BLADES. SCALE, 1:2

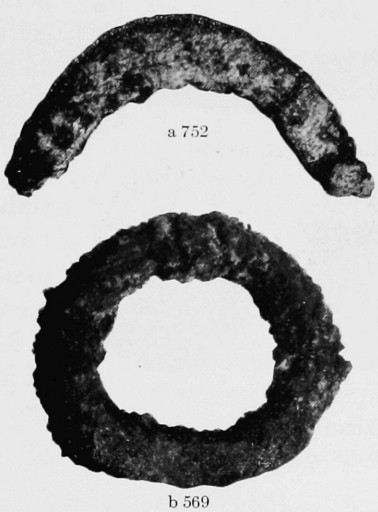

FIG. 362.—FIBULA AND RING OF IRON. ACTUAL SIZE

IRON

It is significant that the majority of iron objects of Period IV are weapons, such as spearheads, arrowheads, and blades. This seems to confirm our belief that the power of Hittite arms was due to the discovery of iron (cf. p. 214).

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Size is at present the only criterion to distinguish the heads of larger weapons from those of arrows. There are some medium-sized points which may be points of either spears or arrows.

The type specimens, Spearheads a 1048, a 731, and a 870 and Arrowhead a 615 (Fig. 359), show diamond-shaped cross-sections. As a rule the larger points have laurel-leaf shape, with a shaft end, and the arrowheads remind one of the common spindle-shaped points of bronze or copper. No. a 1117 (Fig. 360) may be a dagger blade. It is .16 long and .045 broad.

Corrosion makes it difficult to define the details of blades (Fig. 361), as of many other iron objects. Blade a 240 may serve as a type. It is one-edged with broad back. A rivet for the handle is preserved in Blade a 418 (not illustrated).

Ring b 569 (Fig. 362) has a rectangular cross-section .004×.007.

A single iron fibula (No. a 752, .065 long, Fig. 362) is in the collection of Alişar IV objects. The diameter of its circular cross-section is .01. It is not known whether or not it was ornamented in the same way as the fibulae of bronze or copper.

An oblong object, No. a 1044 (not illustrated), has a piece (handle?) of bronze or copper attached to one end. It measures .056×.025×.015. Its shape reminds one of the pottery loom weights (cf. Fig. 337).

STONE OBJECTS

The series of Alişar IV stone objects shows again that certain types of specimens tend to persist unchanged over a considerable time and cannot be used, individually at least, as guide fossils. Quantitatively, however, they may be used as criteria. The great number of stone objects in Stratum I contrasts with the increasing scarcity of such objects in the succeeding layers.

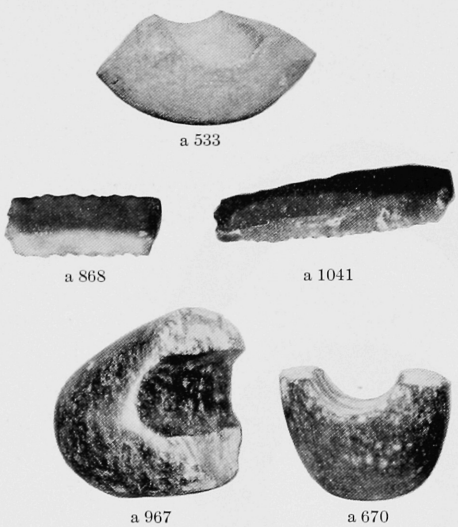

Fig. 363.—Mace Head, Flakes, and Hammer Axes of Stone

Certain stone objects are attributed to Period IV because of their associations. None is typical for that period. A mace head, chalcedony flakes, hammer axes, celts, polishing-stones, hand mills with grinders, and small polished stones could as well have been found in Stratum I, Stratum II, or Stratum III. The whetstones we know from Stratum II and Stratum III, and they are frequent in Stratum V also. A small perforated slab, beads or pendants, an incised object, and a stone bowl were attributed to Period IV on account of their associations with definite Alişar IV remains. Otherwise we would have been unable to determine their origin.

Mace head No. a 533 (Fig. 363) occurred on the floor of a partly excavated room of Plot N 11[1] in the uppermost sublevel of Stratum IV. It was discolored and cracked by heat. The perforation is conoid. The fragment measures .054×.042×.0225.[2]

Two chalcedony flakes (Fig. 363) occurred in Section 17 of Level 4, and there is a possibility that they had intruded into the bottom deposit of Stratum IV from Stratum III. Fragment a 868, of milky chalcedony, has retouched cutting edges. Its dimensions are .031×.013×.005. Flake a 1041 is of brown chalcedony. One end is broken. The dimensions are .047×.014×.0055.

[1] The chief excavations in this plot were made in 1927 and are not shown in Fig. 277.

[2] A pear-shaped mace head (792) was found in Stratum IV in 1927. See *OIP* VII 77.

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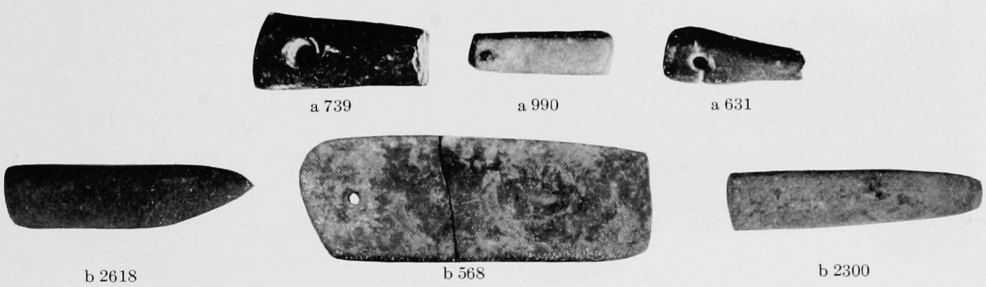
Hammer ax No. a 670 (Fig. 363) was found near the floor of Section 4. Made of greenish gray serpentine(?), it is broken at the cylindrical perforation. It measures .031×.040×.037. Hammer ax No. a 967 occurred about 1 meter below the floor belonging to Walls 17*a* and 17*b*. Since in the lowest deposit in this room Alişar III sherds appeared, the specimen may belong to either Period III or Period IV. The fragment is of highly polished greenish serpentine, with cylindrical perforation and round hammering(?) edge. The dimensions are .0425×.039×.044.

Celt a 925 (Fig. 364), of light green serpentine, was found in Section 18 of Level 4. Its edge is battered. The celt is .032×.029×.015. Celt b 2476, of diorite(?), was found in Plot J 33 at a depth of .40–1.00. The beautifully decorated Alişar IV Jar b 2542 occurred in the same layer. Celt b 2659, found in Plot N 13 in a low layer of Level 4, is made of polished gray serpentine(?). It has an abruptly converging cutting edge.

a 925 b 2476 b 2659

FIG. 364.—STONE CELTS. SCALE, 2:3



a 739 a 990 a 631

b 2618 b 568 b 2300

FIG. 365.—WHETSTONES. SCALE, 1:2

Whetstones are shown in Figure 365. No. b 2618 is of a type which was found in Level 4 only. It is pointed at one end and unperforated. Its surface is smooth and dark gray. Whetstone b 568 was found in Plot AA 16 in a mixed layer in which Alişar IV sherds prevailed. It is a roughly rectangular slab .009 thick, perforated at one end. The material is hard grayish brown stone. Perforated Whetstones a 739, a 990, and a 631 closely resemble those found in Stratum II and Stratum V. However, Nos. a 631 (.0095 thick) and a 739 (.015 thick) were definitely associated with Stratum IV. Whetstone a 990 (.0075 thick) was high in Stratum IV in Plot P 12. Its perforation contains a fragment of a bronze ring or wire. Whetstone b 2300, found in Plots DD–EE 10 in a mixed layer in which Alişar IV sherds prevailed, is of similar shape to those just described, but the perforation was left unfinished. It is a smooth, light brown slab.

Stone a 828 (Fig. 366), found in the refuse intermediate between Levels 3 and 4 (Alişar V and Alişar IV), may be either a whetstone or a polishing-stone. Its dimensions are .098×.032 ×.015. Nos. a 922 (.042×.029×.026) and a 978 (.047×.035×.011) from Level 4 may have been polishing-stones.

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Pestle b 609 (Fig. 367), associated with the bottom refuse of Stratum IV, is of grayish green diorite. It has a rounded rectangular cross-section. The convex stamping ends are somewhat battered, while the rest is polished.

No. b 2477 (Fig. 368), found in Stratum IV of Plot J 33, is a limestone(?) slab with rough surface. It is .021 thick.

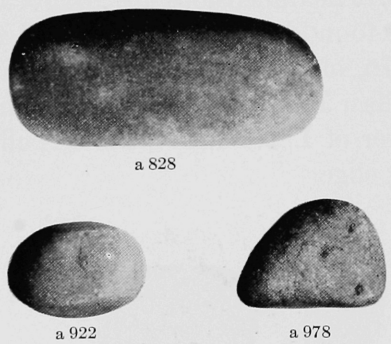

FIG. 366.—POLISHING-STONES(?)

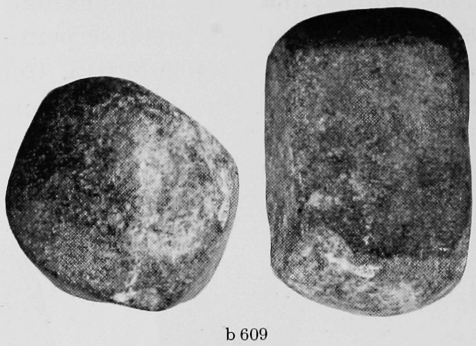

FIG. 367.—PESTLE. SCALE, 1:3

FIG. 368.—PERFORATED LIMESTONE(?) SLAB. SCALE, 2:3

FIG. 369.—STONE BEAD, PENDANTS, AND A SMALL POLISHED STONE. ACTUAL SIZE

A bead and two pendants (Fig. 369) were definitely associated with Stratum IV, but we must always consider the fact that small objects are more likely to migrate from their original layers than larger specimens.

Bead a 735 is of brown chalcedony, biconoid and truncated. It measures .013×.011. Pendant a 721 is a grayish white oval .0035 thick. Pendant a 988 is of milky chalcedony, pear-shaped, encircled by two grooves, and perforated near the more pointed end.

No. a 594 (Fig. 369) from Level 4 belongs to the category of "small polished stones" so frequent in Stratum I.

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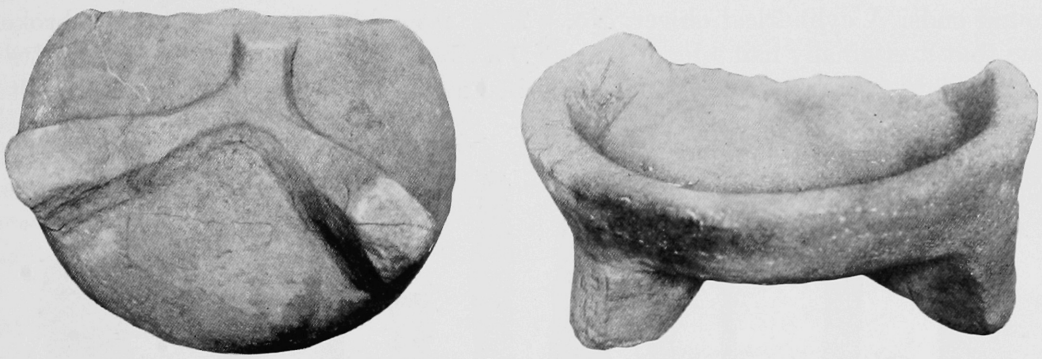
The fragment No. b 1028 (Fig. 370) was found in Plot S 23, .60–1.20 deep. In the find-layer Alişar IV sherds prevailed; but there were also one *terra sigillata*, two Alişar V, two Alişar III, and two Alişar II sherds. This polished fragment is of grayish brown serpentine(?). On one long side there are portions of two wheel(?) designs, separated by a triangular incision. Two series of small triangular depressions extend below this pattern in a straight line. On one short side there are three rows of such wedge-shaped incisions and part of a large circle inclosing smaller circles. There are traces of incisions on the opposite short side also.

Bowl a 1065 (Fig. 371) was found somewhat above the floor of Section 22, about flush with the remains of Sublevel 3*a* in Sections 18 and 20. It is .13 high; the bottom is .041 thick. The material is grayish green sandstone. The rather smooth surface is blackened at one spot on the exterior.

b 1028

FIG. 370.—STONE FRAGMENT WITH INCISED ORNAMENTATION. ACTUAL SIZE



a 1065

FIG. 371.—STONE BOWL. BOTTOM AND SIDE VIEWS. SCALE, 1:4

BONE OBJECTS

Objects made of bone are less common in Stratum IV than in earlier strata. Some of the bone objects found here are of unmistakable Period II workmanship. We consider these objects (Fig. 372) as accidental intrusions from the earlier stratum, although they suggest a direct superposition of Alişar IV remains on culture refuse of Alişar II.

Pin a 675, found in Section 2 of the Alişar IV citadel, is a Period II pin with discoid head and polished gray-brown surface. It seems to have been repointed. Period III remains were mixed with those of Period IV in the find-layer. Ornamented Slip a 986, found in Section 9 of the citadel, is decorated with incised rings with central dots alternating with oblique crosses, a pattern similar to those on the Period II slips previously described. Its polished surface is yellowish brown, partly blackened by fire. Period III remains were mixed with those of Period IV in this room. Ornamented Tube a 588, found in Plot M 13, is of Alişar II type. It is ornamented with bands of incised crosshatchings, and the surface is yellowish brown. The find-layer was unmixed Period IV.

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Awl b 1455 (Fig. 372) is of a type most frequent in Stratum I. At its find-spot Alişar II remains were mixed with those of Alişar IV.

Ornamented Slip b 591 (Fig. 373), cut to the shape of a rectangle, is light brown and polished. One side is ornamented with oblique crosses separated by deep incisions. It was found where Period IV remains prevailed.

Fig. 372.—Bone Objects Intrusive from Earlier Strata. Scale, 1:2

Fig. 373.—Ornamented Bone Slip. Actual Size

The remaining bone objects (Fig. 374) were all found in plots and layers ascribed to Period IV. No. a 245 is a solid yellowish brown object with oval cross-section, smooth surface, and round ends. A cylindrical object, No. b 2238, resembles No. a 245, but its broken end suggests that it originally had a handle. Awl(?) a 756 is thin with a polished point. Its rough surface is yellowish brown. No. a 689 is a polished awl fragment. Fragment a 755, split in the

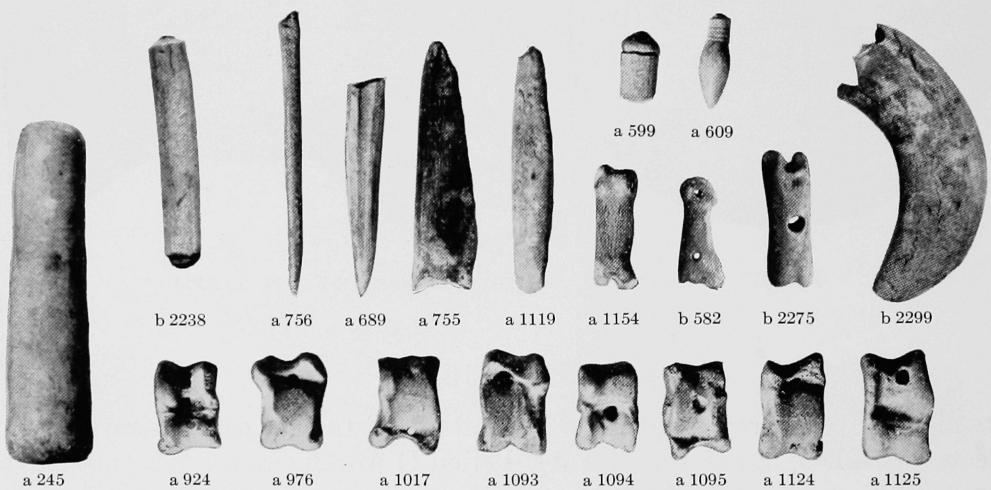

Fig. 374.—Miscellaneous Objects of Bone. Scale, 1:2

middle, is from an unidentified object. Point a 1119 may have been a drill. No. a 599 is a small yellowish brown cylinder with a conoid head. No. a 609 is the head of a weaving(?) tool. Its surface is polished, and four incisions encircle the fragment of stem. Nos. a 1154, b 582, and b 2275 are bones from human feet. There are two perforations in No. b 582, only one in each of the others. No. b 2299 is a polished light brown tusk with two crosswise perforations at the broken base. There is a circular depression on the concave surface, and the point is chipped to form a broad spatula. The remaining specimens illustrated are knuckle-bones such as are present in all strata of the mound from Alişar I to the present day. They

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usually have one perforation, but Bone a 924 has four holes: one lengthwise, two connecting the narrow sides, and one connecting the broad sides.

GLASS, FAYENCE, AND FRIT

Most of the glass, fayence, or frit objects found in Stratum IV are beads, and it is extremely difficult to establish the chronological relations of such small objects. They migrate easily from one stratum to another; they may be re-used by later settlers who happen to pick them up; and the like. We are fairly safe only if we find them associated with datable objects in a hoard or with a burial.

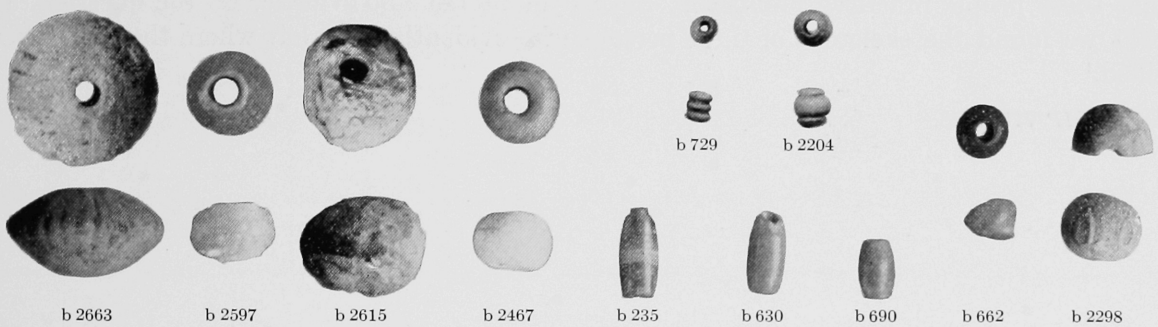

FIG. 375.—BEADS OF FAYENCE(?), GLASS, OR FRIT. ACTUAL SIZE

Only four beads of the present series (Fig. 375) occurred in a sufficiently thick section of Stratum IV to eliminate to a certain extent the possibility of intrusion. Fayence(?) bead No. b 2663, found low in the refuse of Section 11 in Plot M 13, is biconoid with faintly scalloped edge. It has a yellowish gray surface. Bead b 2597, found in the same room and layer, is a greenish blue glass ring. The wall of its perforation is white; and perhaps the surface of the bead, now corroded, was coated in the same manner. Bead b 2615, obtained in the thick Alişar IV layer of Plot YY 26 at a depth of 3.10–3.30, is almost globular. It is apparently true glass, light greenish blue in color but covered with a thick iridescent film. Bead b 2467, from the same plot, 1.30–1.80 deep, is ring-shaped, of light bluish gray fayence and lustrous.

FIG. 376.—A SHELL. ACTUAL SIZE

Other beads occurred in mixed layers of various plots. They were attributed to Period IV because of the prevalence of Period IV sherds in the find-layers, but it is doubtful whether they actually originated at this period. We feel fairly sure that Beads b 235, b 630, and b 690, for instance, belong to Period V because beads of this type were frequent in the later stratum. These three glass beads are oblong and dark blue. Bead b 235 is ornamented by three wavy white threads.

Bead b 662 is dark blue glass, irregular in shape. Bead b 2298, a globe, is of grayish white fayence(?). A row of oval impressions, each inclosed by a thin orange line, gives the appearance of an eye bead. The grooved frit Beads b 729 and b 2204 may have been imported, for we know that such segmented beads occurred at Knossos and in Egypt during the 18th and 19th dynasties, from the 16th century to about 1200 B.C.[1] Bead b 729 is tubular, and No. b 2204 is barrel-shaped.

A frit scaraboid was described on page 262, and a black frit or fayence pin head on page 268.

[1] See Evans, *The Palace of Minos* I 491, and E. Naville and H. R. Hall, *The XI Dynasty Temple at Deir-el-Bahari*, Part III (London, 1913).

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SHELL

Shell b 2598 (Fig. 376), a bluish white fragment, was found in mixed Alişar III and Alişar IV refuse near the bottom of Stratum IV in Plot M 13. It is not impossible that it is of Alişar II origin. We repeat, small objects migrate easily, and only in Stratum II are shells and objects made of them at all frequent.

DISPOSAL OF THE DEAD

We found no burials which we can definitely ascribe to Period IV. It has been suggested that these people practiced cremation, but as yet we have no evidence on the question. In 1927 we found the skeletons of three persons who evidently were left where they fell when killed.[1]

[1] See *OIP* VII 26–28.

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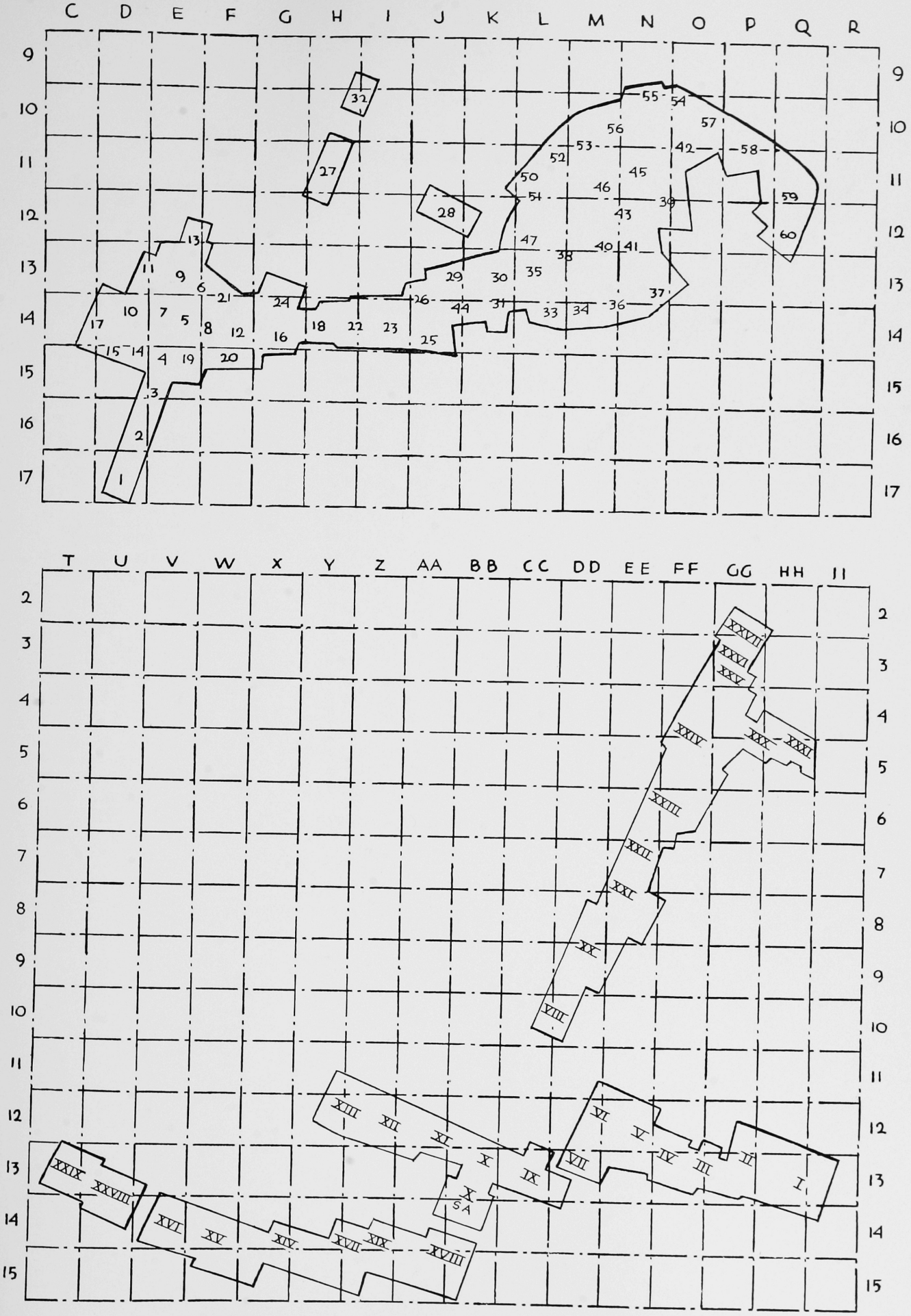

Fig. 377.—Correlation of the Plot Numbers of 1927 with the Later Designations

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PLATE I

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Decorated Chalice and Pitcher of Alişar I. Scale, 2:3

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PLATE II

b 2806

b 1670

Bowl and Chalice of Alişar II. Scale, 3:5

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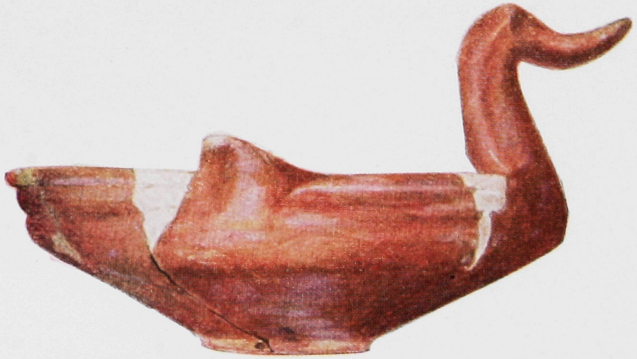
b 1868



b 1673

b 1425

Cup, Zoömorphic Bowl, and Pitcher of Alişar II. Scale, 3:5

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b 1671

PITCHERS OF ALIŞAR II. SCALE, 3:5

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PLATE V

b 419*a*

b 181

b 515

Trichrome Sherd of Alişar III, Decorated Cup of Early Alişar III, and Decorated Bowl of Alişar III. Scale, 2:3

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PLATE VI

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Decorated Jar of Alişar IV. Scale, 2:5

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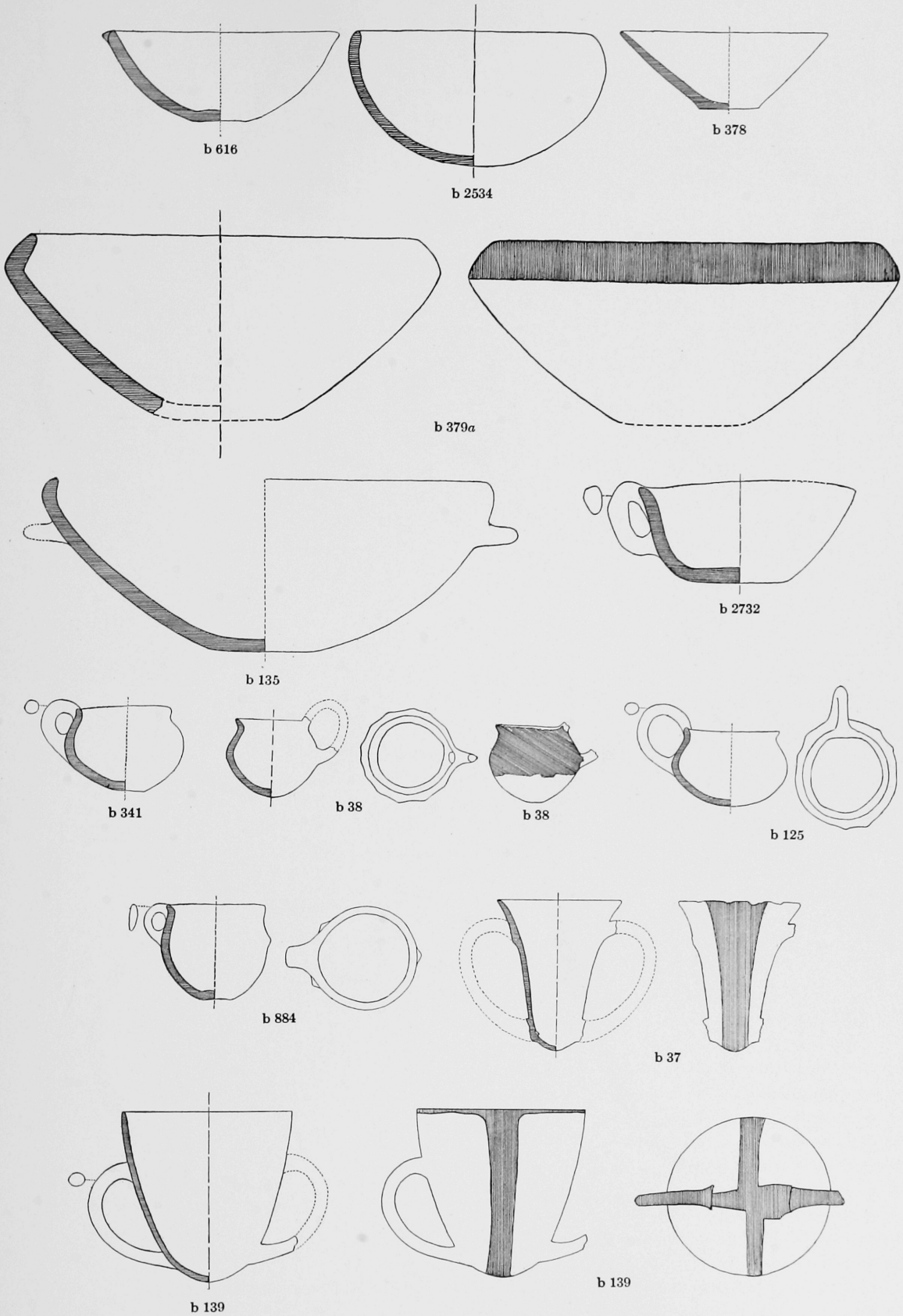
PLATE VII



Bowls, Cups, and Chalices of Alişar I. Scale, 1:4

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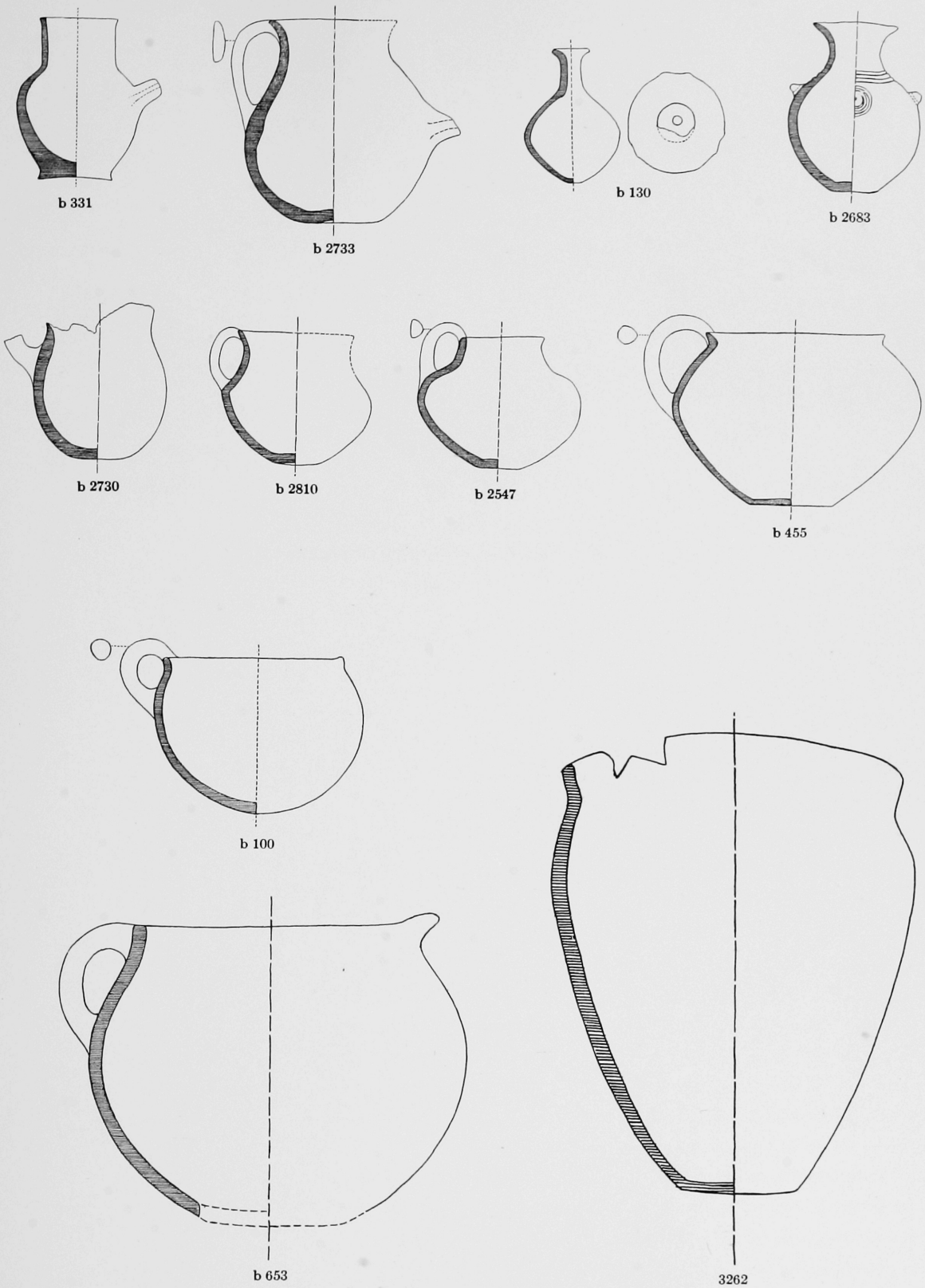

Pitchers and Jars of Alişar I. Scale, 1:4. Storage Jar 3262. Scale, 1:12

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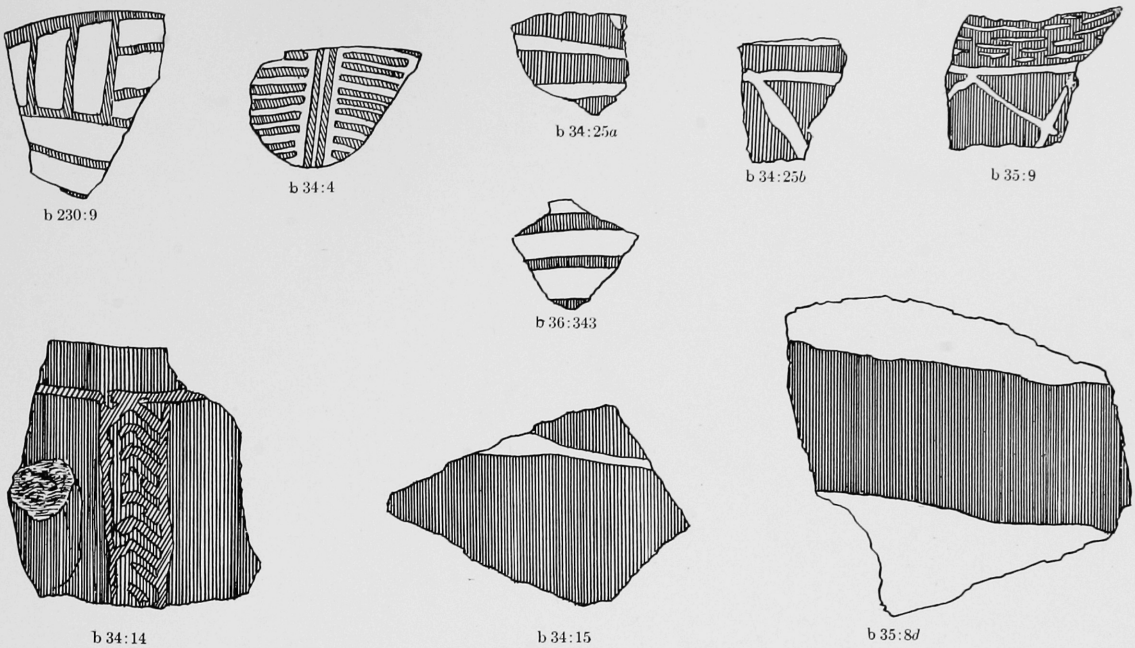
PLATE IX



Decorated Potsherds of Alişar I. Scale, 1:2

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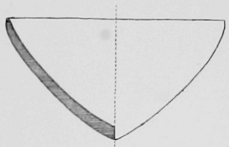
PLATE X



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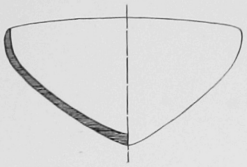

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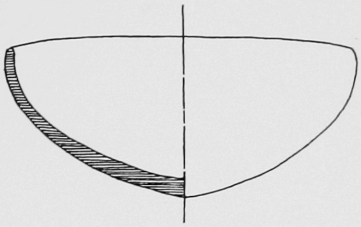

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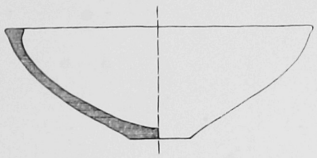

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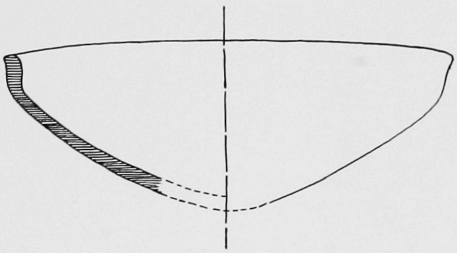

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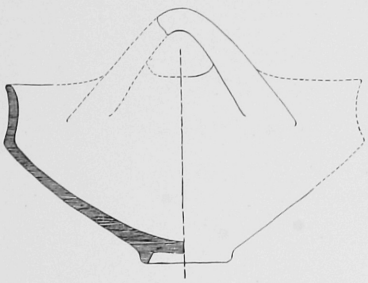

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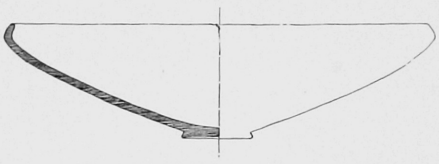

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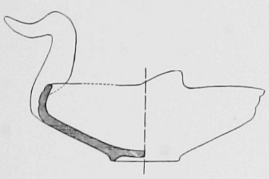

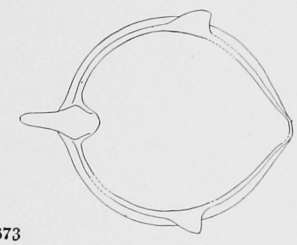

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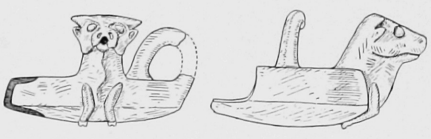

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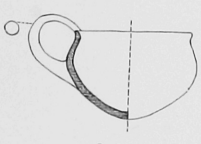

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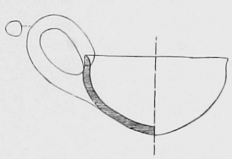

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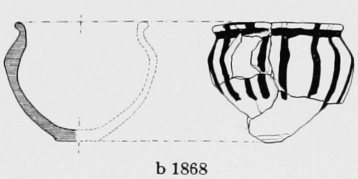

b 1868

Bowls and Cups of Alişar II. Scale, 1:4

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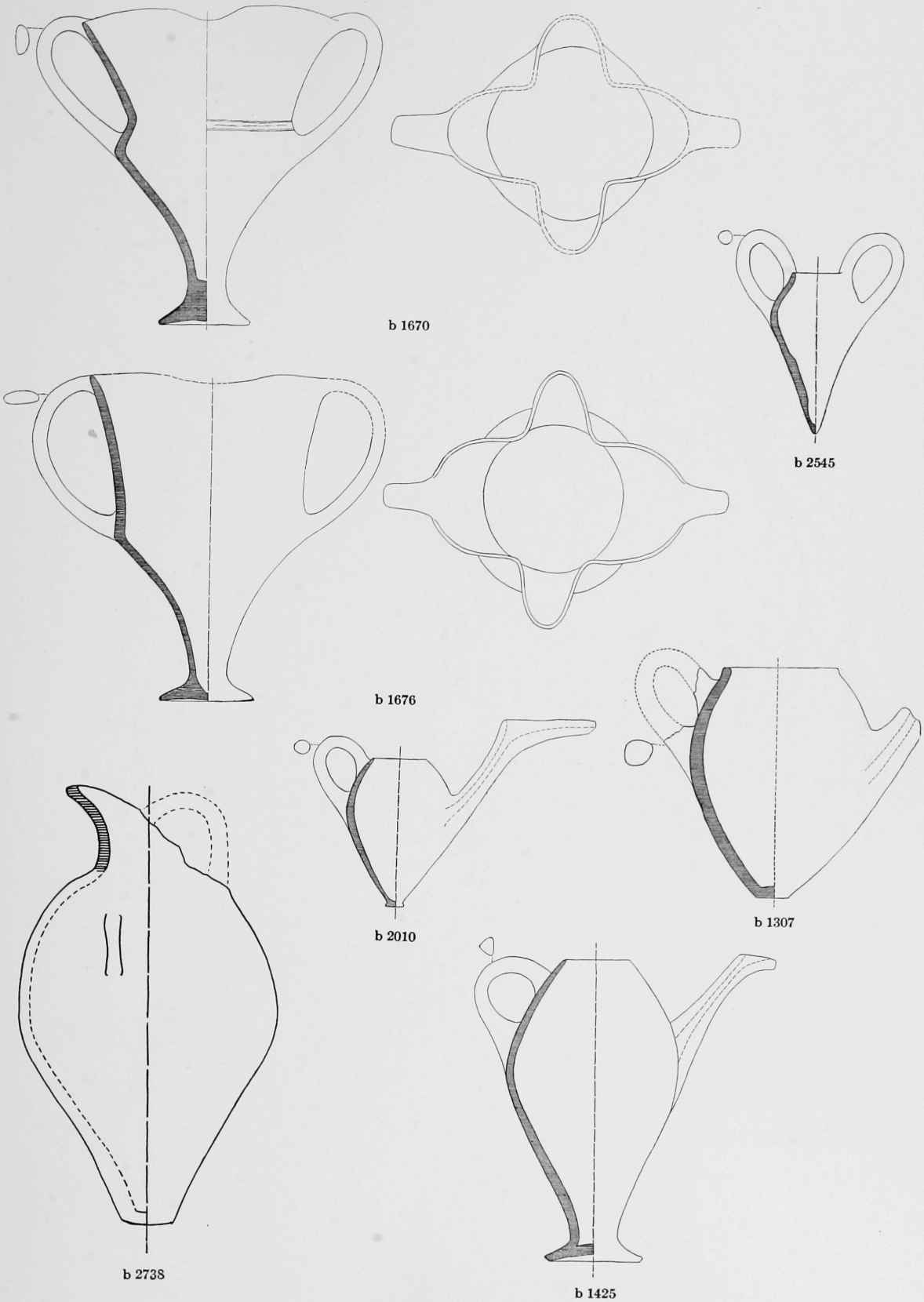

Chalices and Pitchers of Alişar II. Scale, 1:4. No. b 2738. Scale, 1:12

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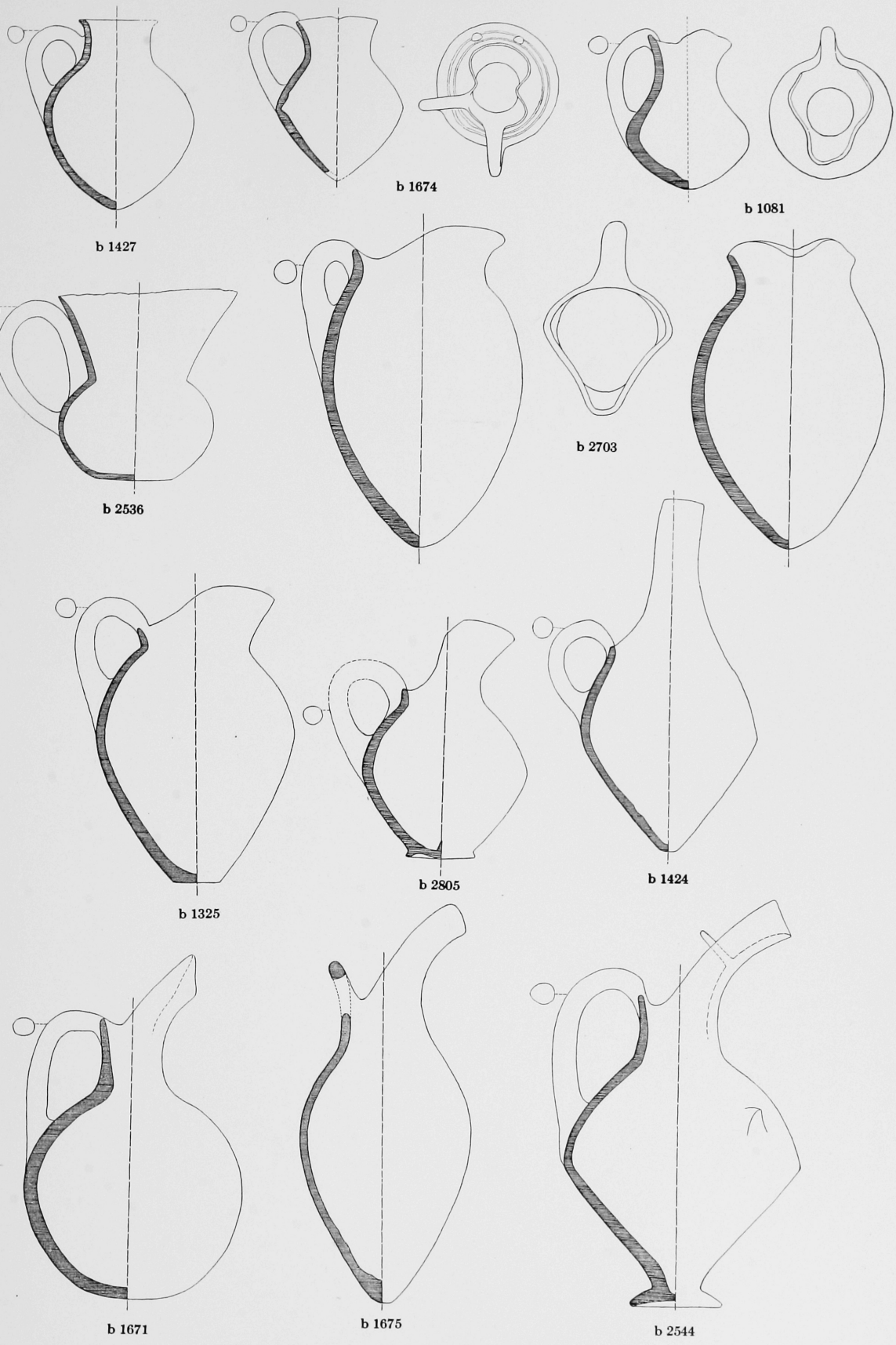
PLATE XII



PITCHERS OF ALIŞAR II. SCALE, 1:4

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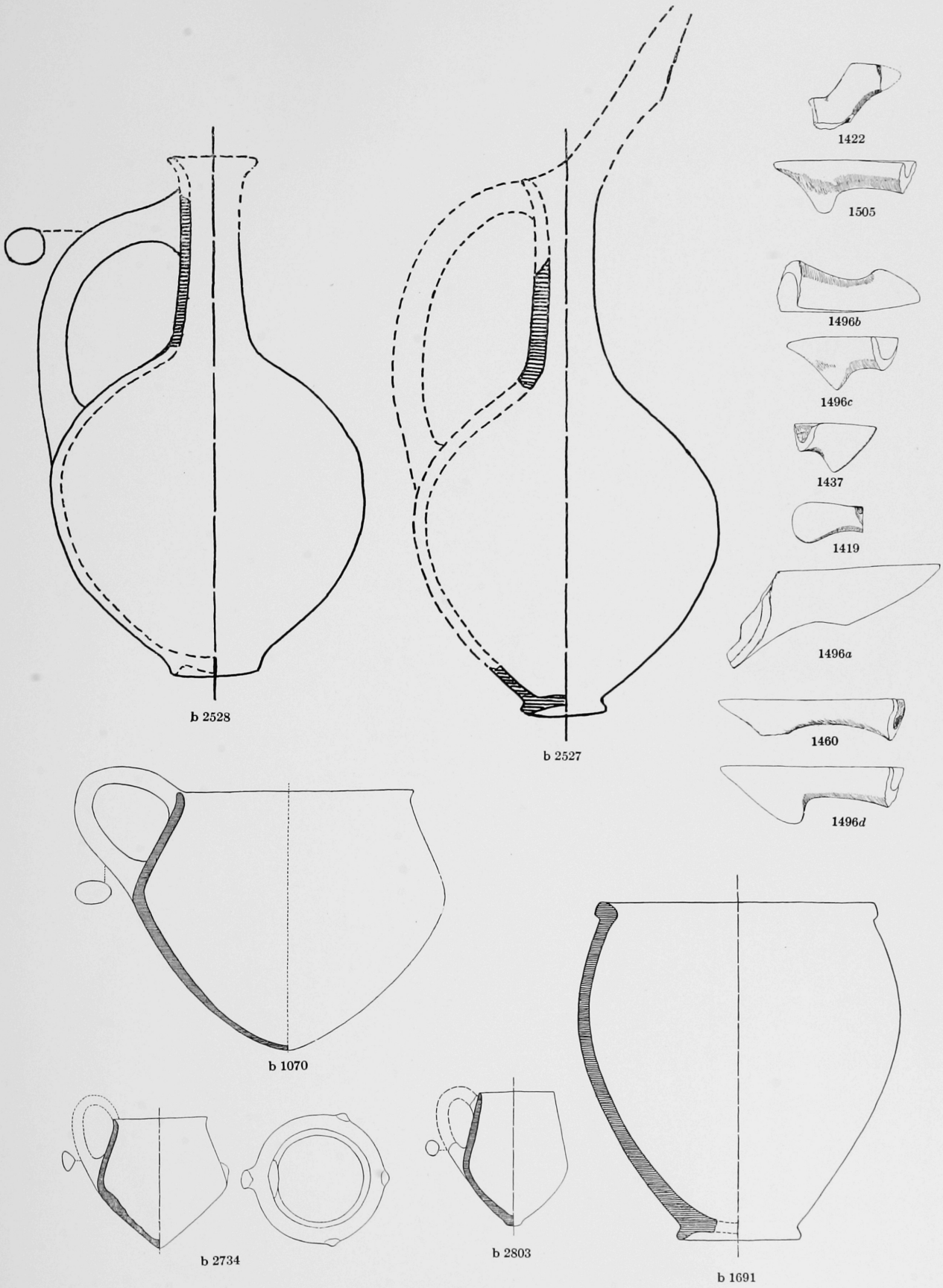

Pitchers, Fragments of Spouts, and Jars of Alişar II. Scale, 1:4

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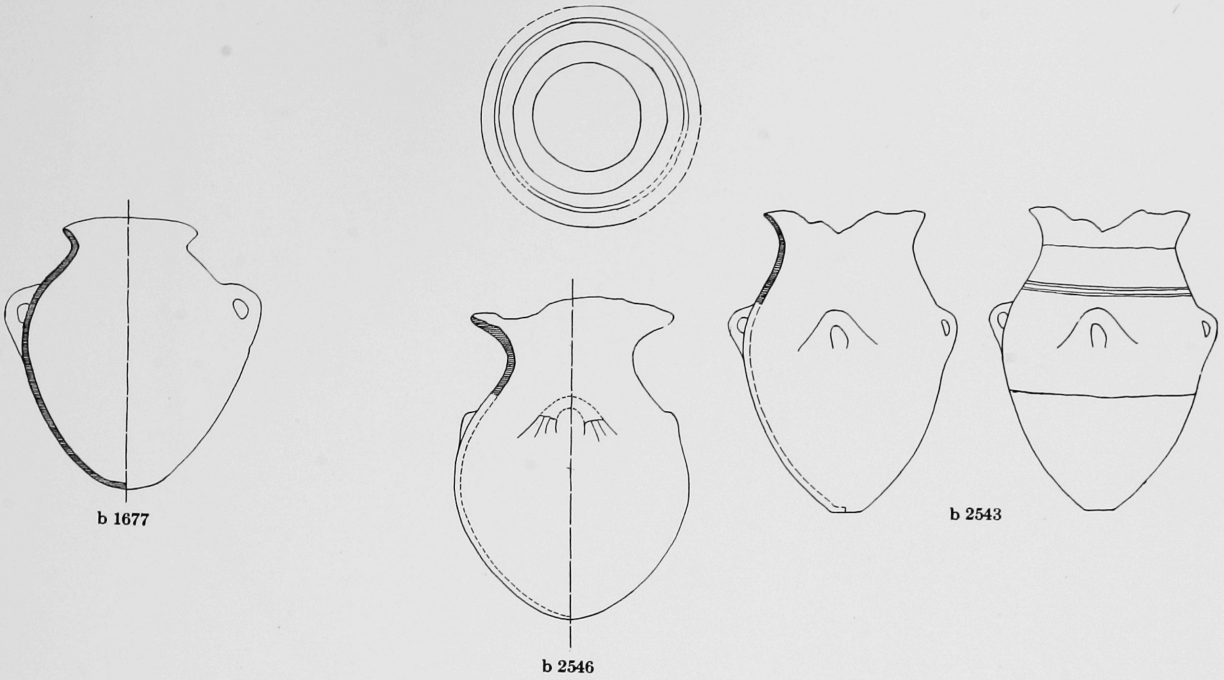

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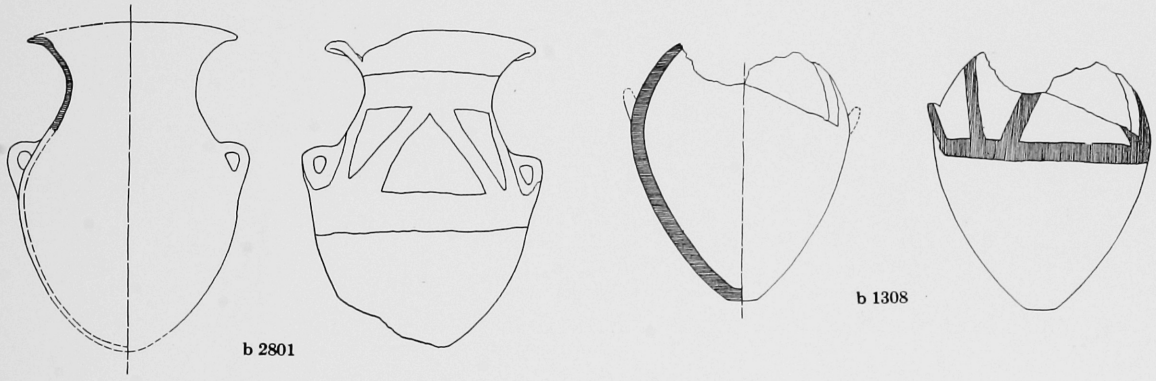

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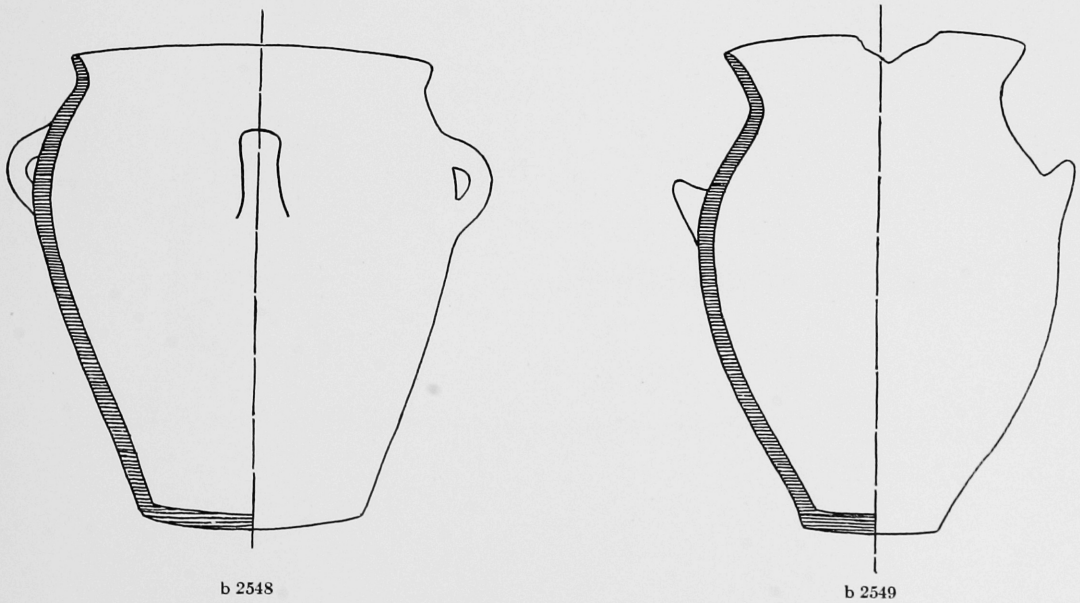

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A Cooking-Jar (b 1677), Storage Jars, and Two Burial Urns of Alişar II. Scale, 1:12

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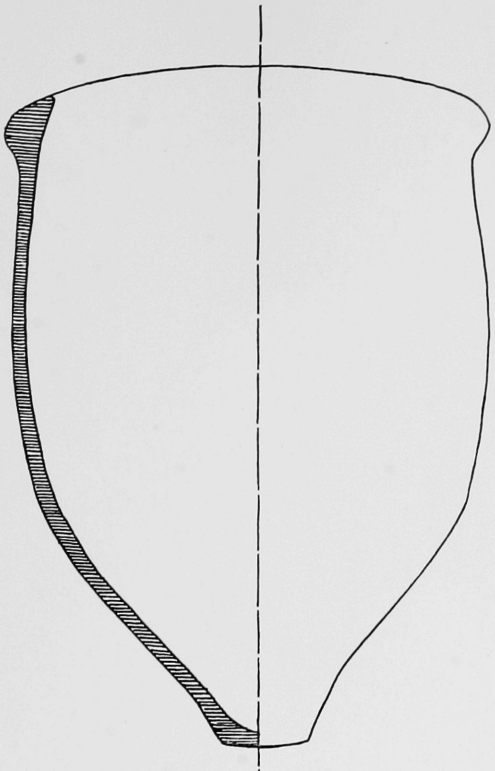

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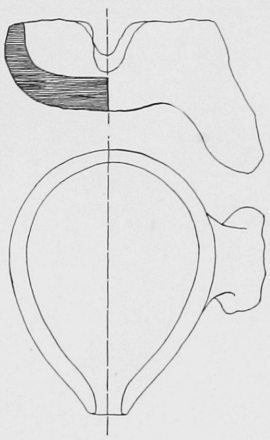

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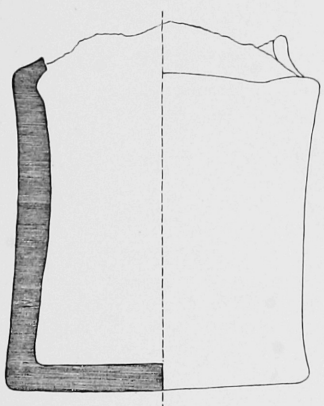

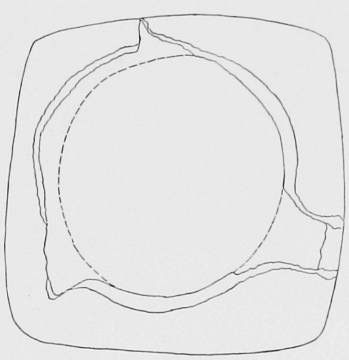

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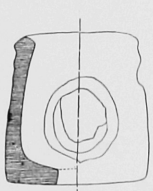

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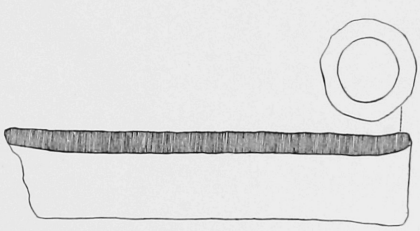

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A Storage Jar. Scale, 1:12. Miscellaneous Pottery Objects of Alişar II. Scale, 1:4

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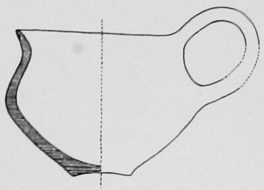

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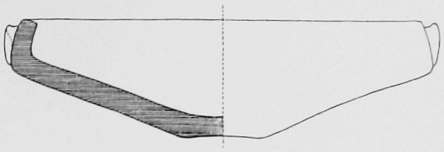

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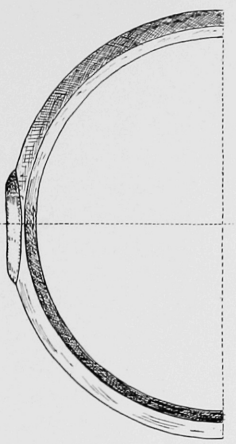

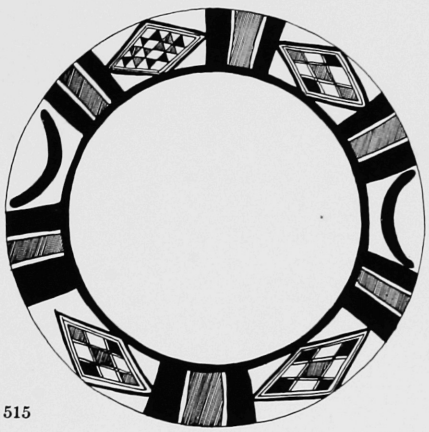

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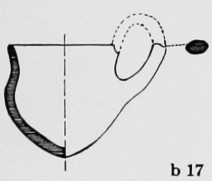
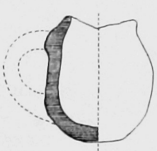
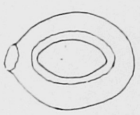
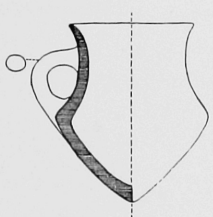


b 17

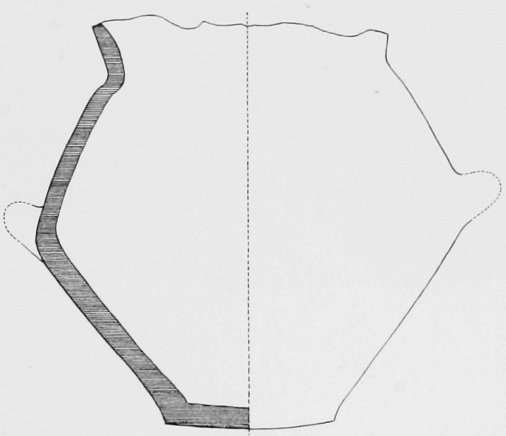




b 328



b 489



b 514

Early Alişar III Cup (b 181) and Alişar III Forms. Scale, 1:4

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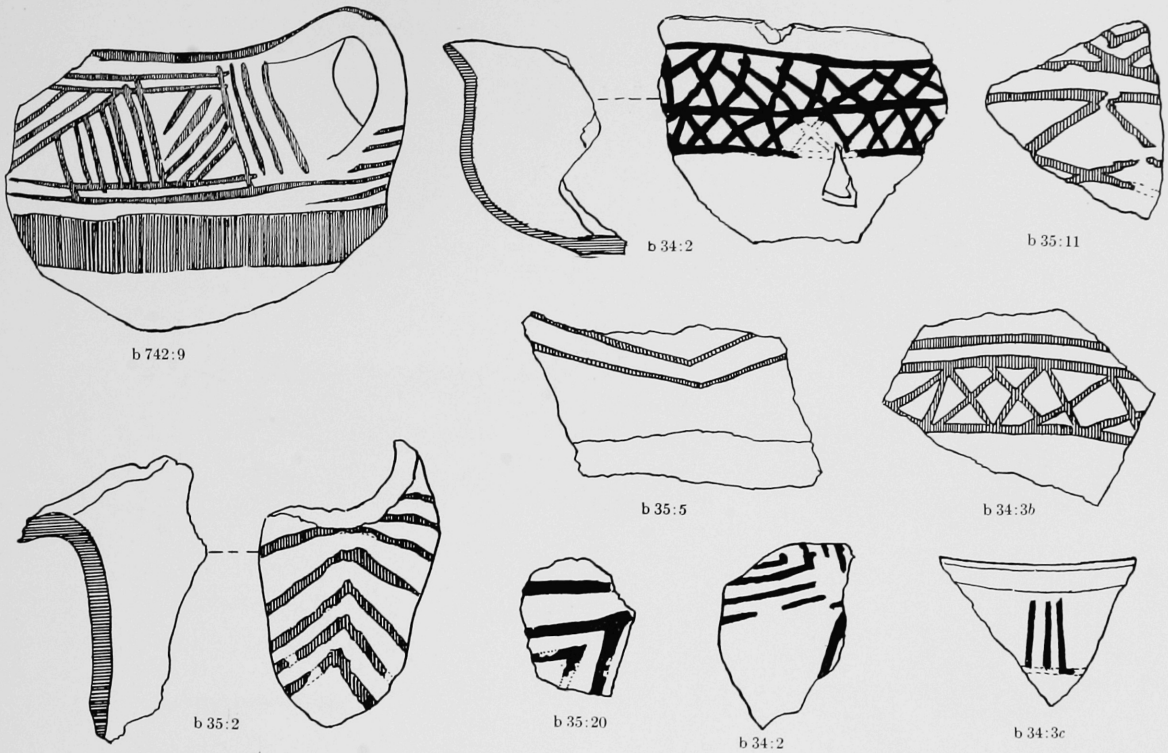
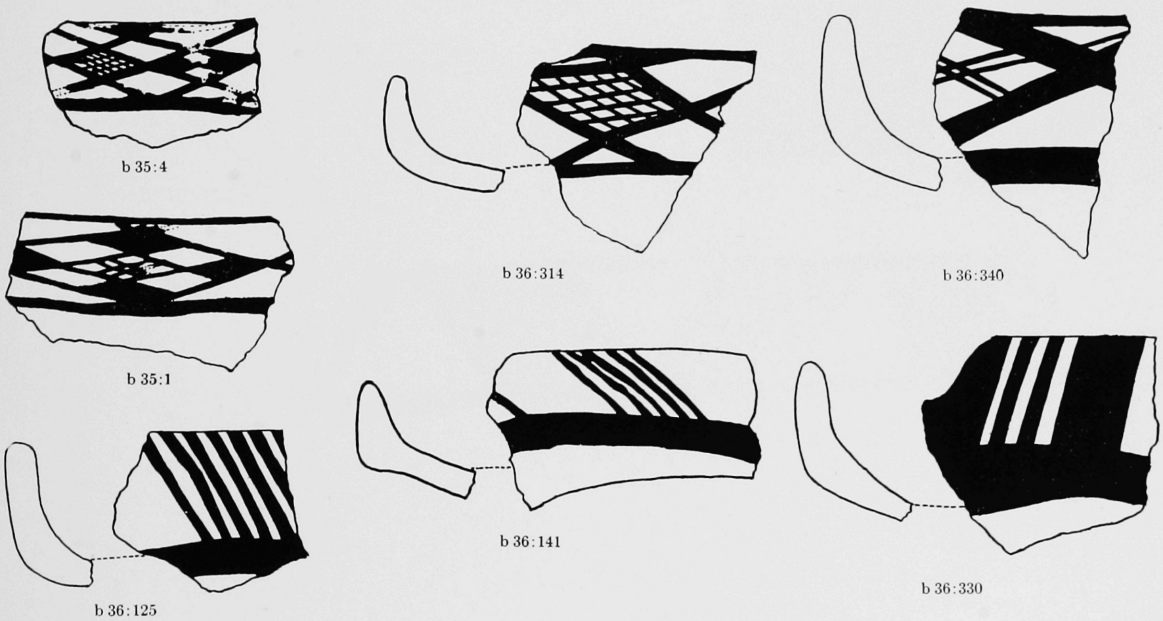


A.—Early Alişar III Sherds. Scale, 1:2



B.—Alişar III Bowl Sherds. Scale, 1:2

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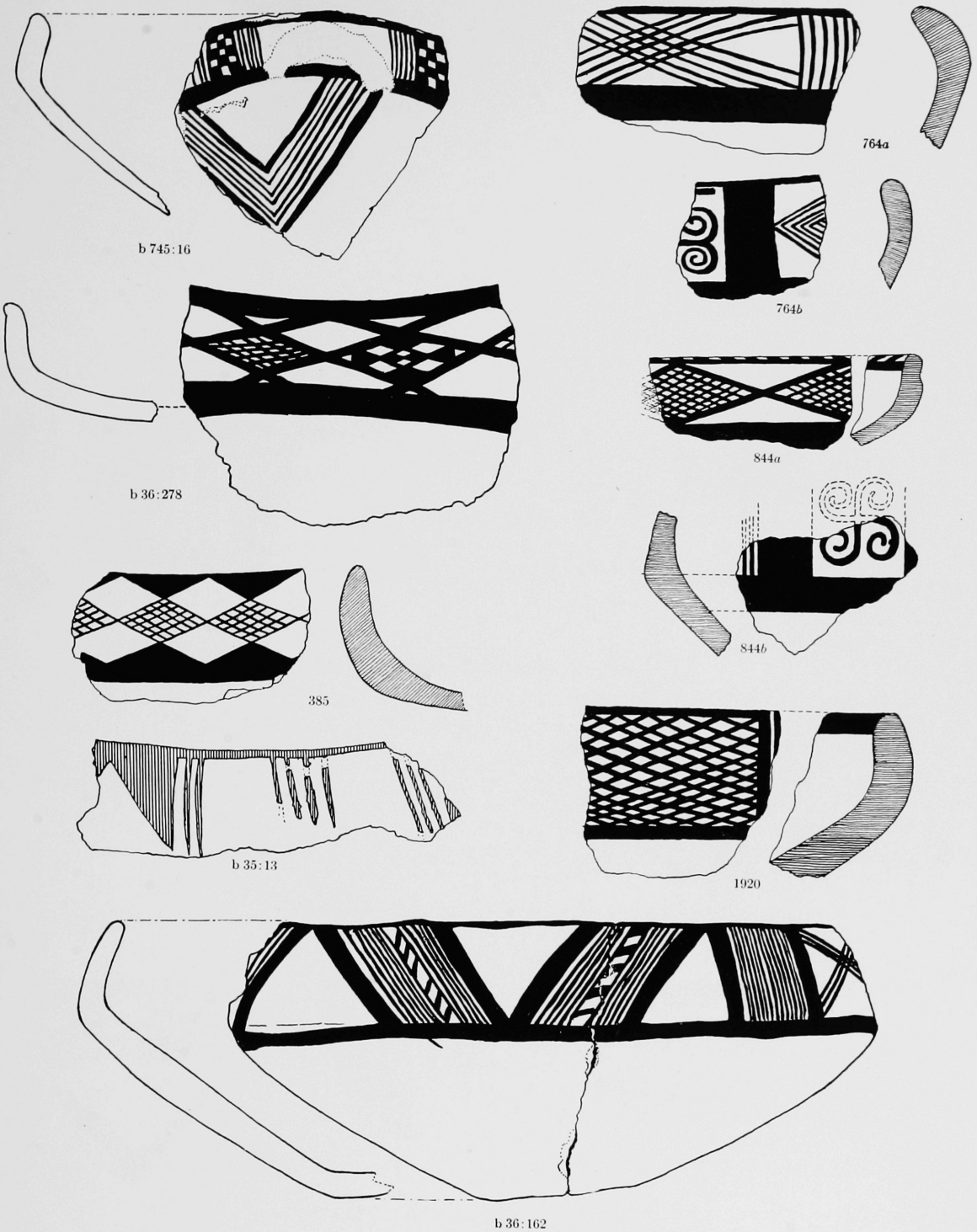

Bowl Sherds of Alişar III. Scale, 1:2

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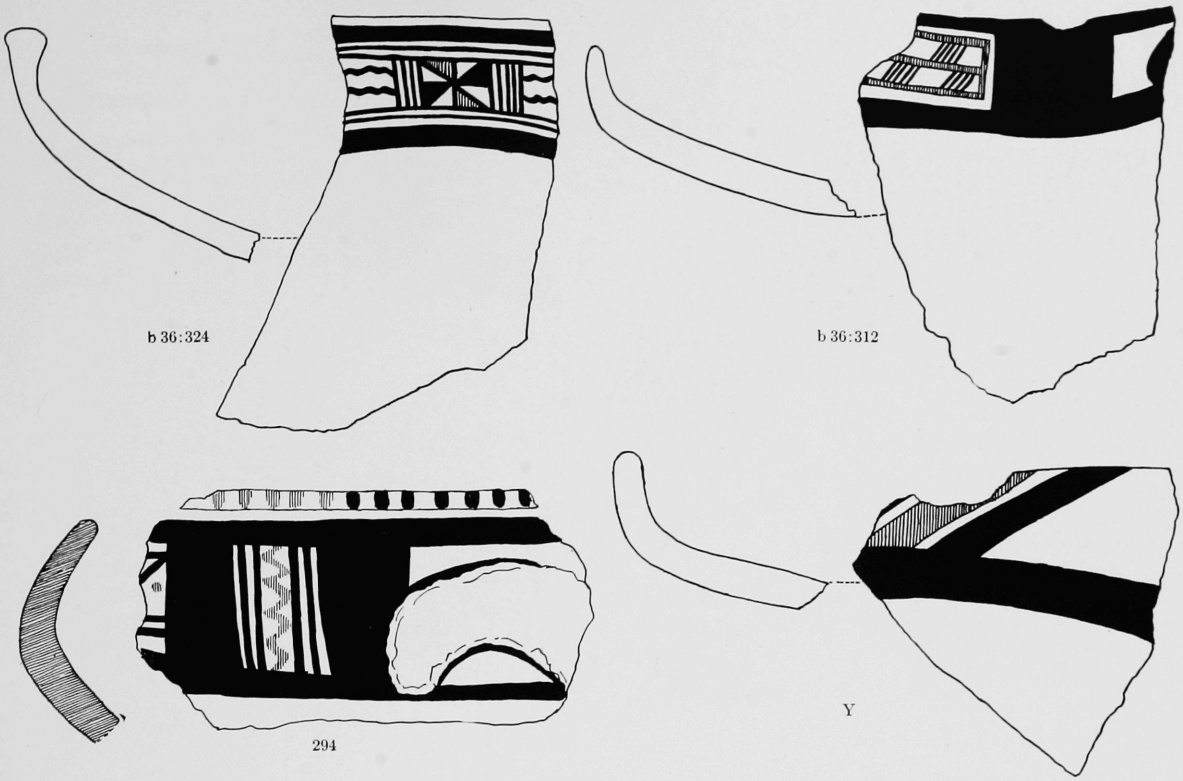
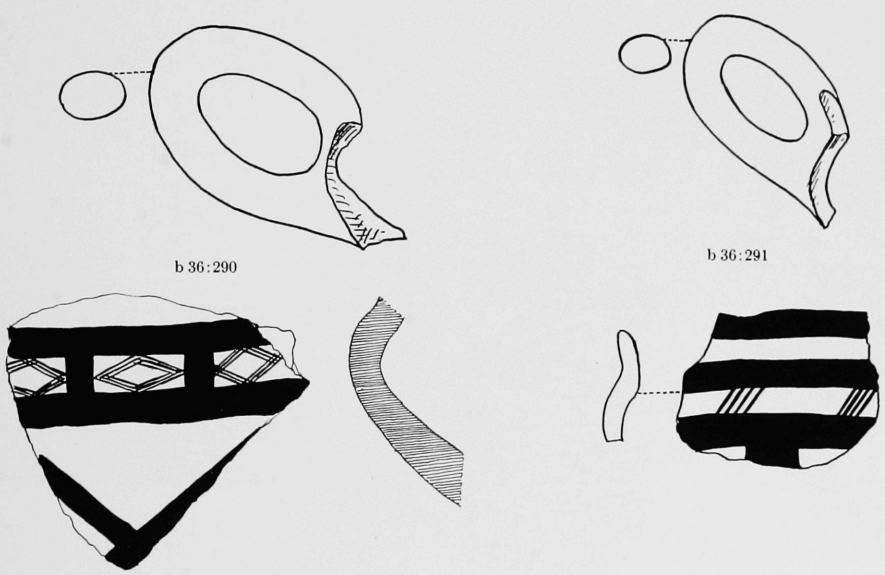


A.—Trichrome Bowl Sherds of Alişar III. Scale, 1:2



B.—Cup Sherds of Alişar III. Scale, 1:2

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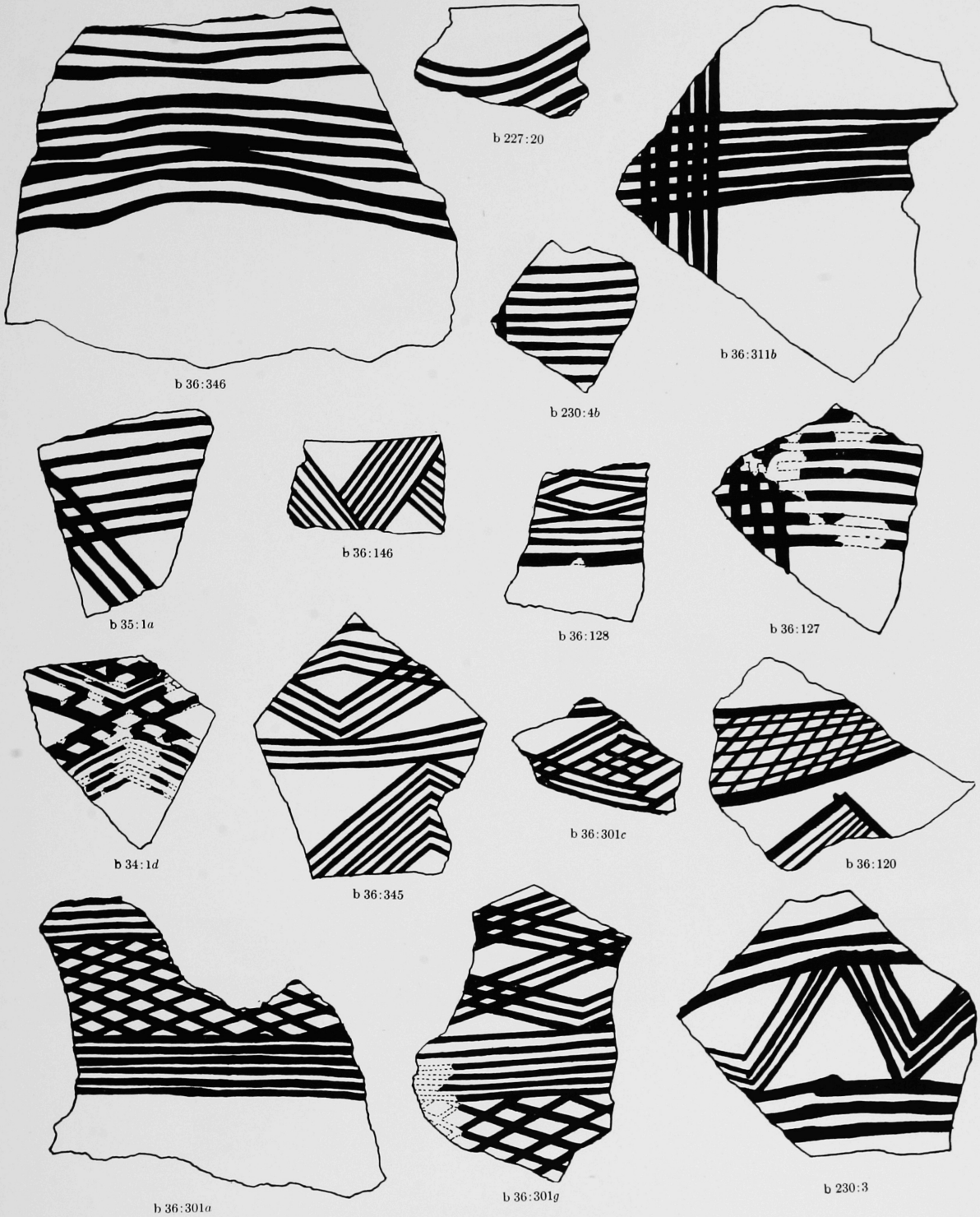

Sherds of Large Jars of Alişar III. Scale, 1:2

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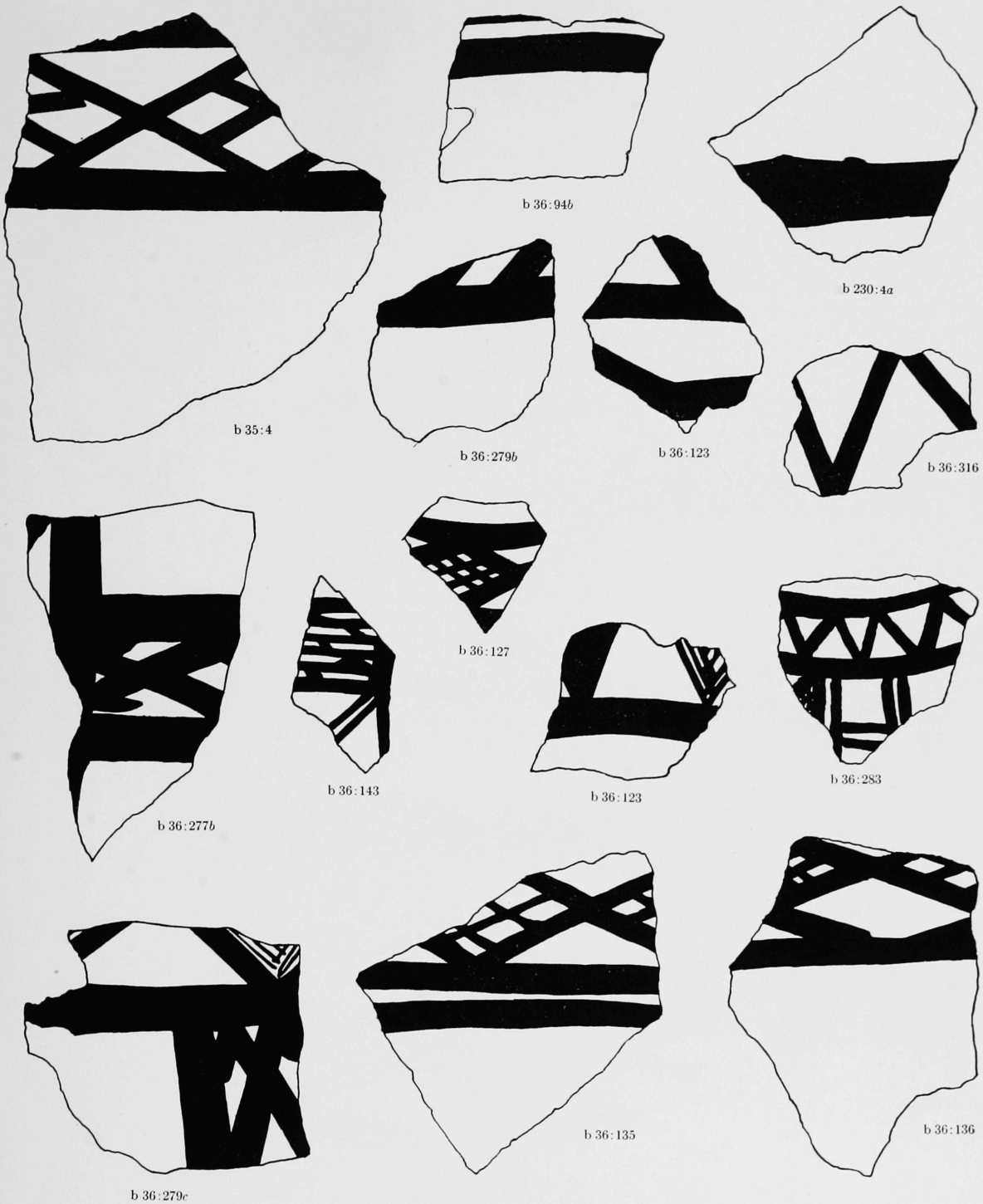

Sherds of Large Jars of Alişar III. Scale, 1:2

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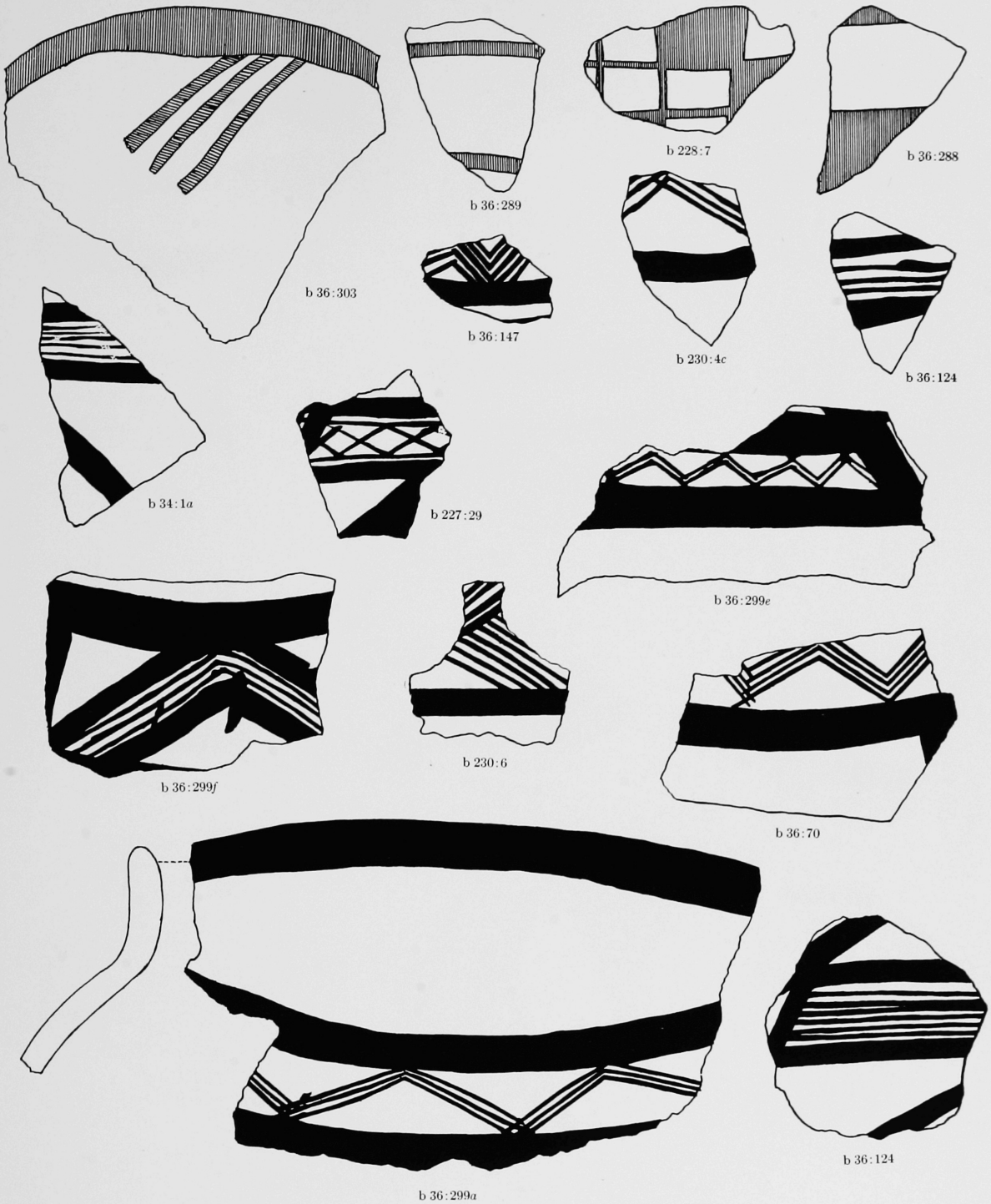

Sherds of Large Jars of Alişar III. Scale, 1:2

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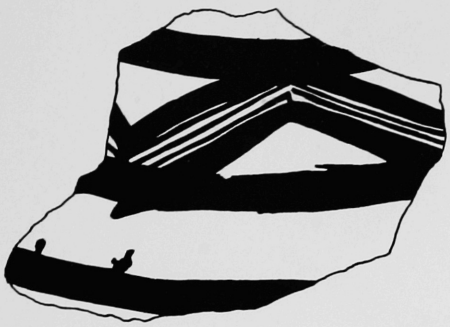
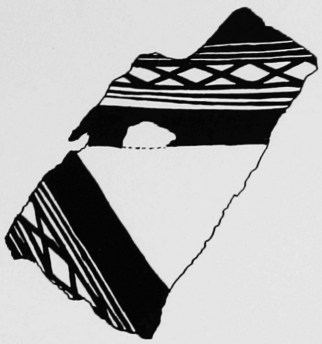


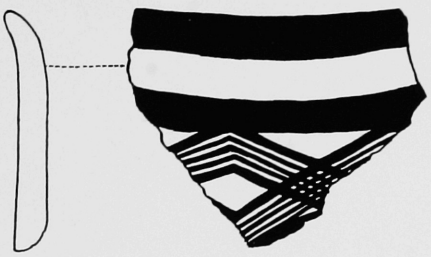
b 36:337



b 36:313*b*

b 36:313*a*

b 36:128



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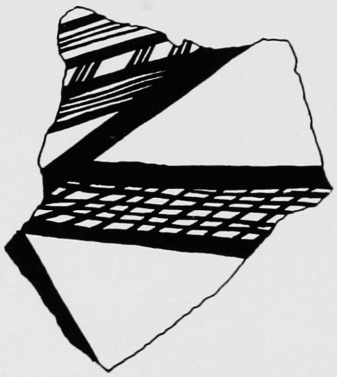
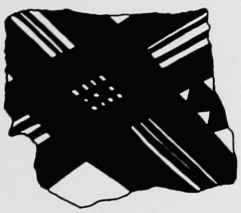


b 36:313*c*



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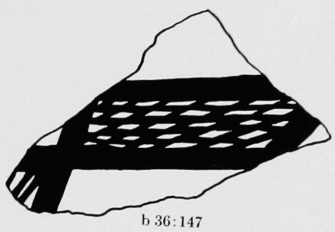

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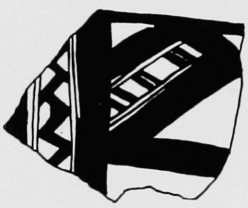
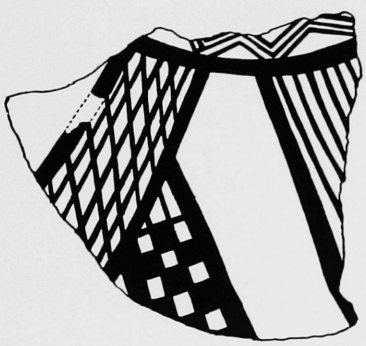


b 36:153

b 1180:84



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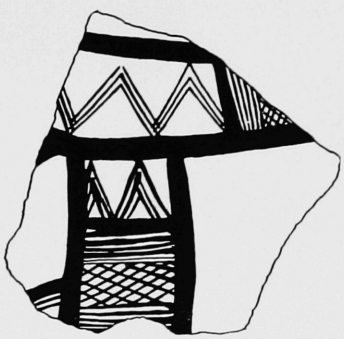

b 36:328

SHERDS OF LARGE JARS OF ALIŞAR III. SCALE, 1:2

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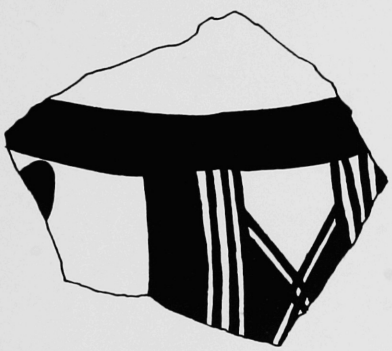
b 36:305

b 36:134

b 36:301*f*



b 36:3

Sherds of Large Jars of Alişar III. Scale, 1:2

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Trichrome Sherds of Large Jars of Alişar III. Scale, 1:2

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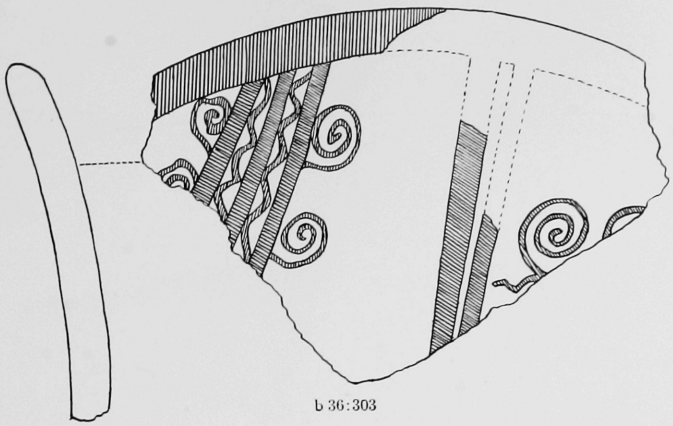
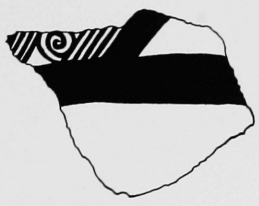


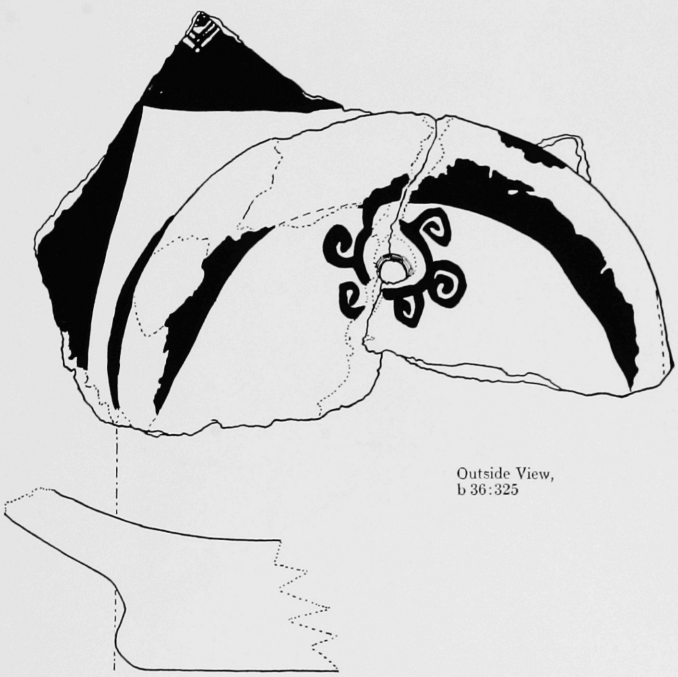
b 36:303

378



b 36:34

b 36:137



Outside View,
b 36:325

Sherds of Large Jars of Alişar III. Scale, 1:2

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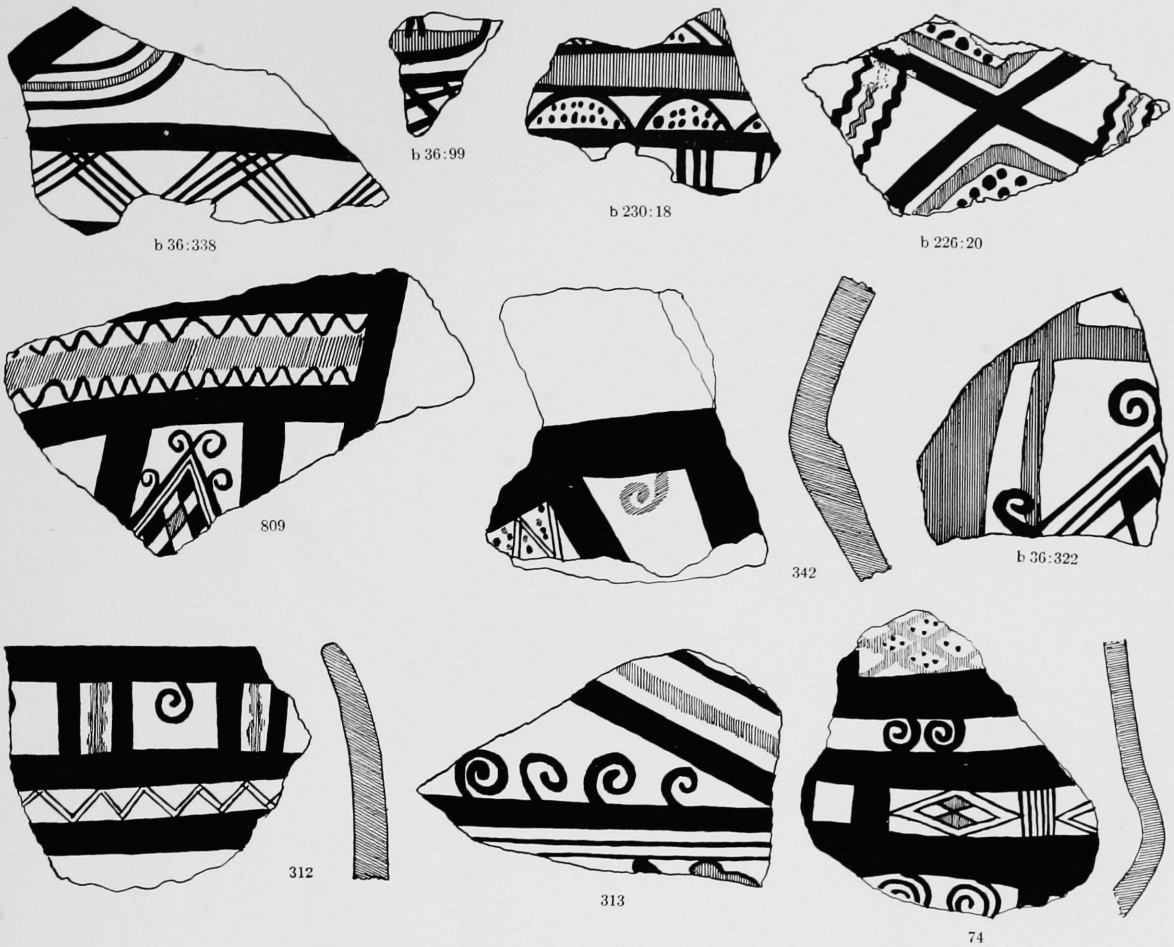
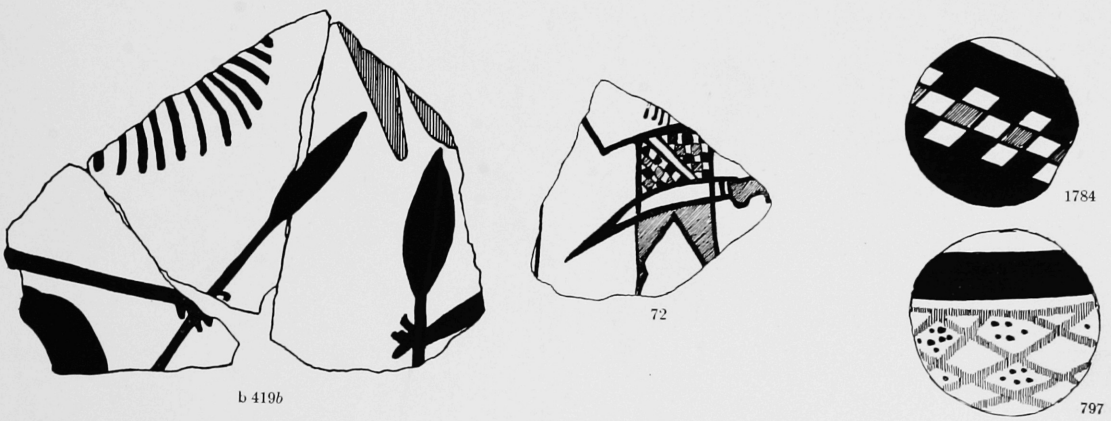


A.—Trichrome Sherds of Large Jars of Alişar III. Scale, 1:2



B.—Sherds Showing Life Forms and Reground Sherds of Alişar III. Scale, 1:2

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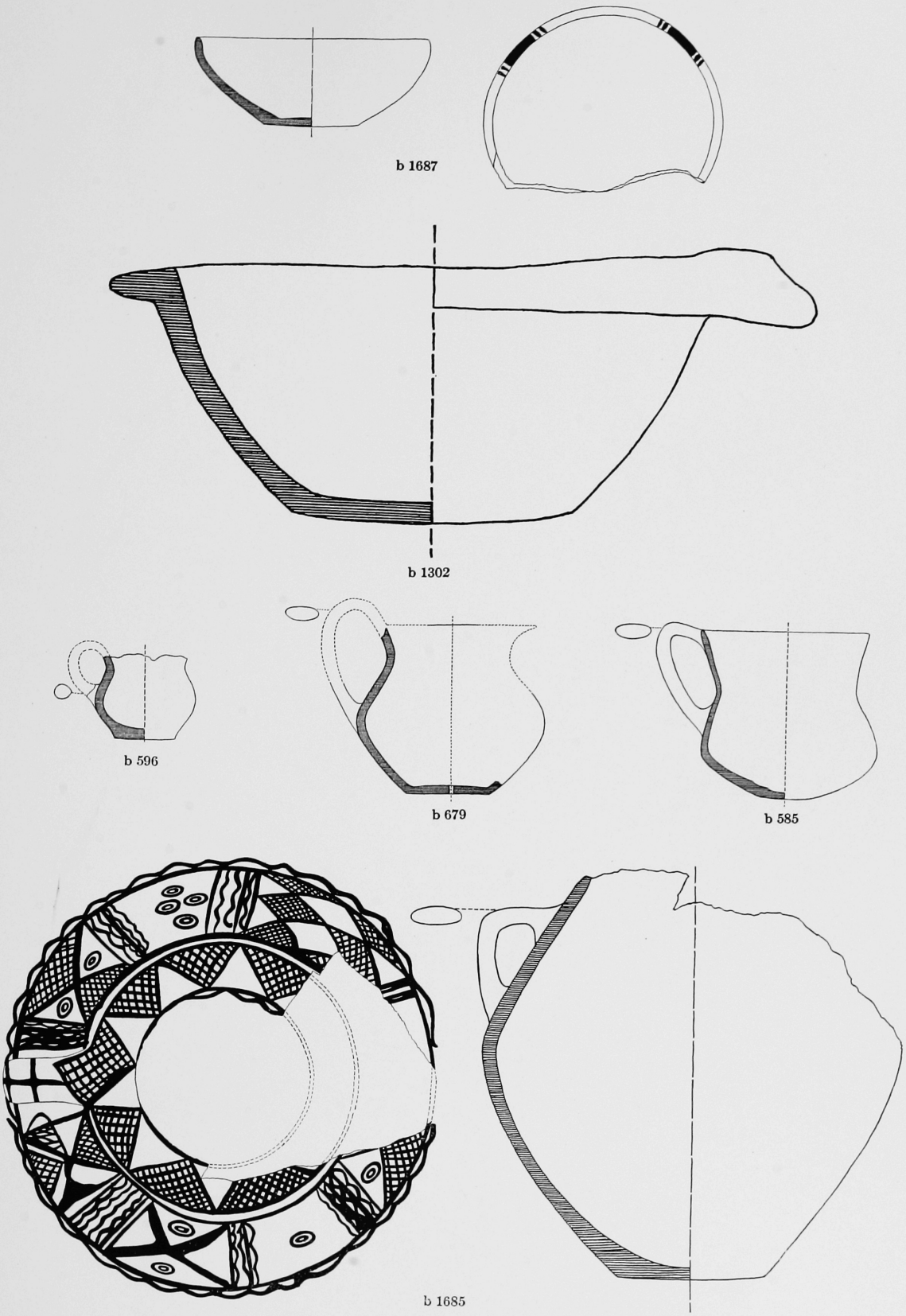

POTTERY FORMS OF ALIŞAR IV. SCALE, 1:4

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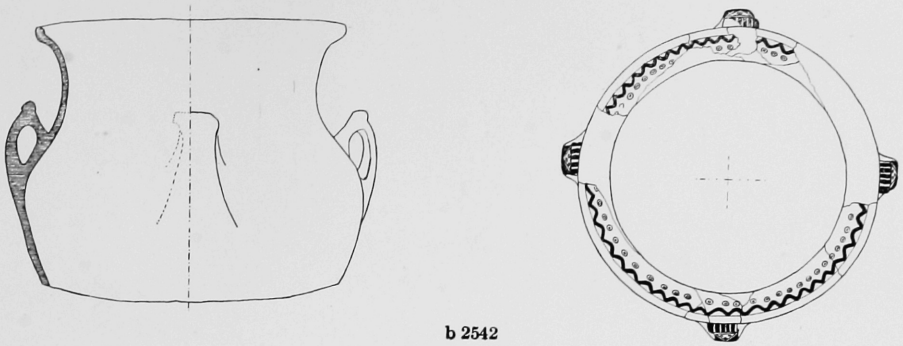
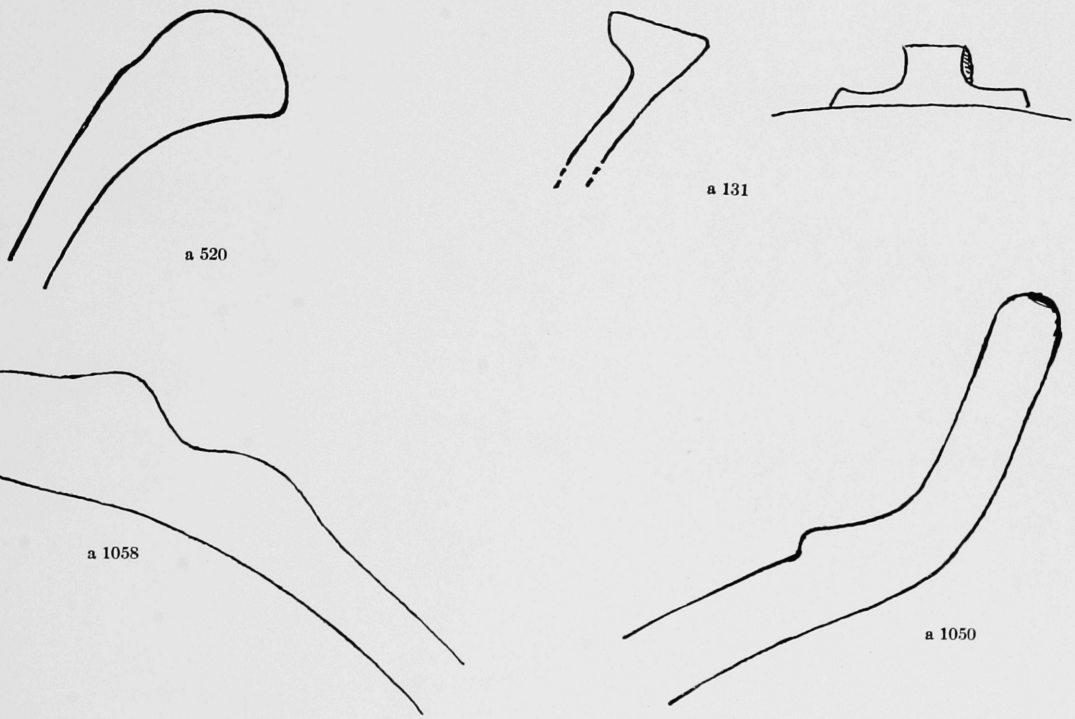


b 2542

A.—Large Decorated Jar of Alişar IV. Scale, 1:8



a 520

a 131

a 1058

a 1050

B.—Rims and a Handle of Alişar IV Jars

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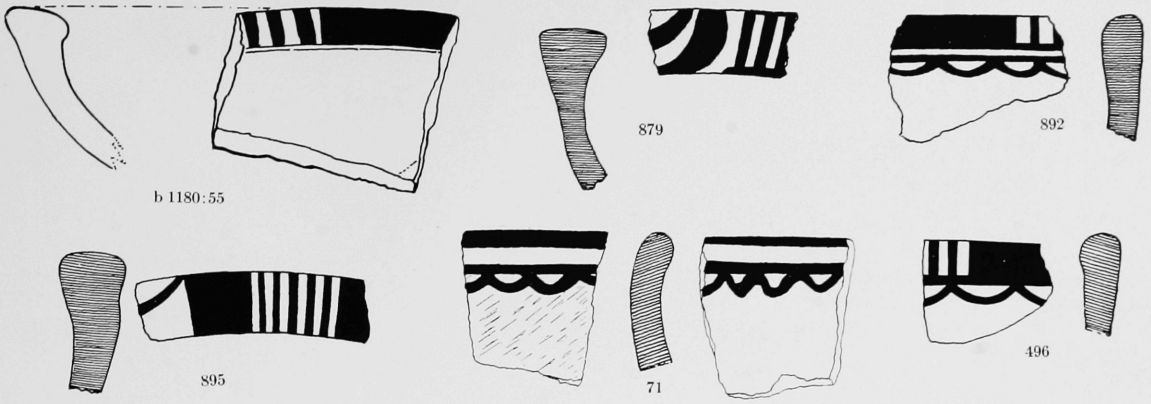
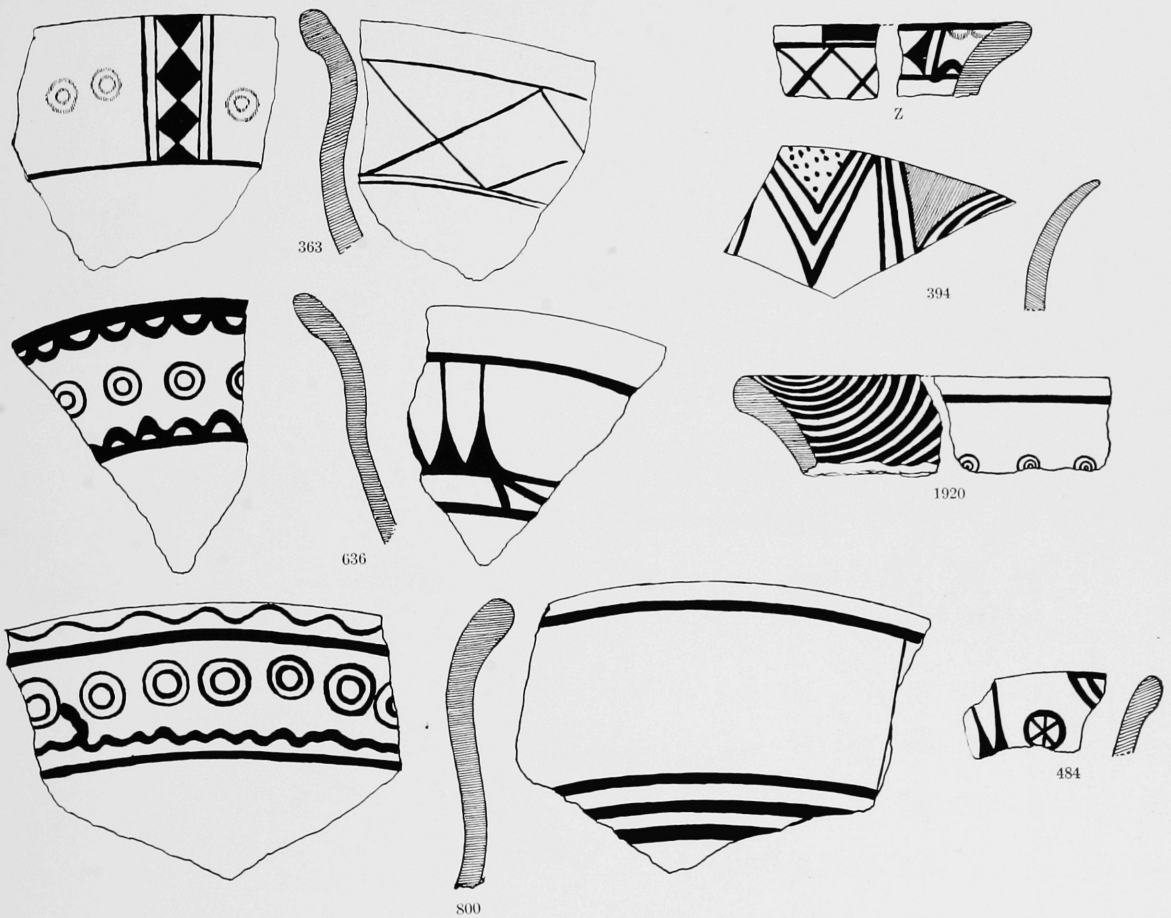


A.—Bowl Sherds with Simple Lip Pattern, Alişar IV. Scale, 1:2



B.—Bowl Sherds (Nos. 363, Z, and 394, Trichrome) of Alişar IV. Scale, 1:2

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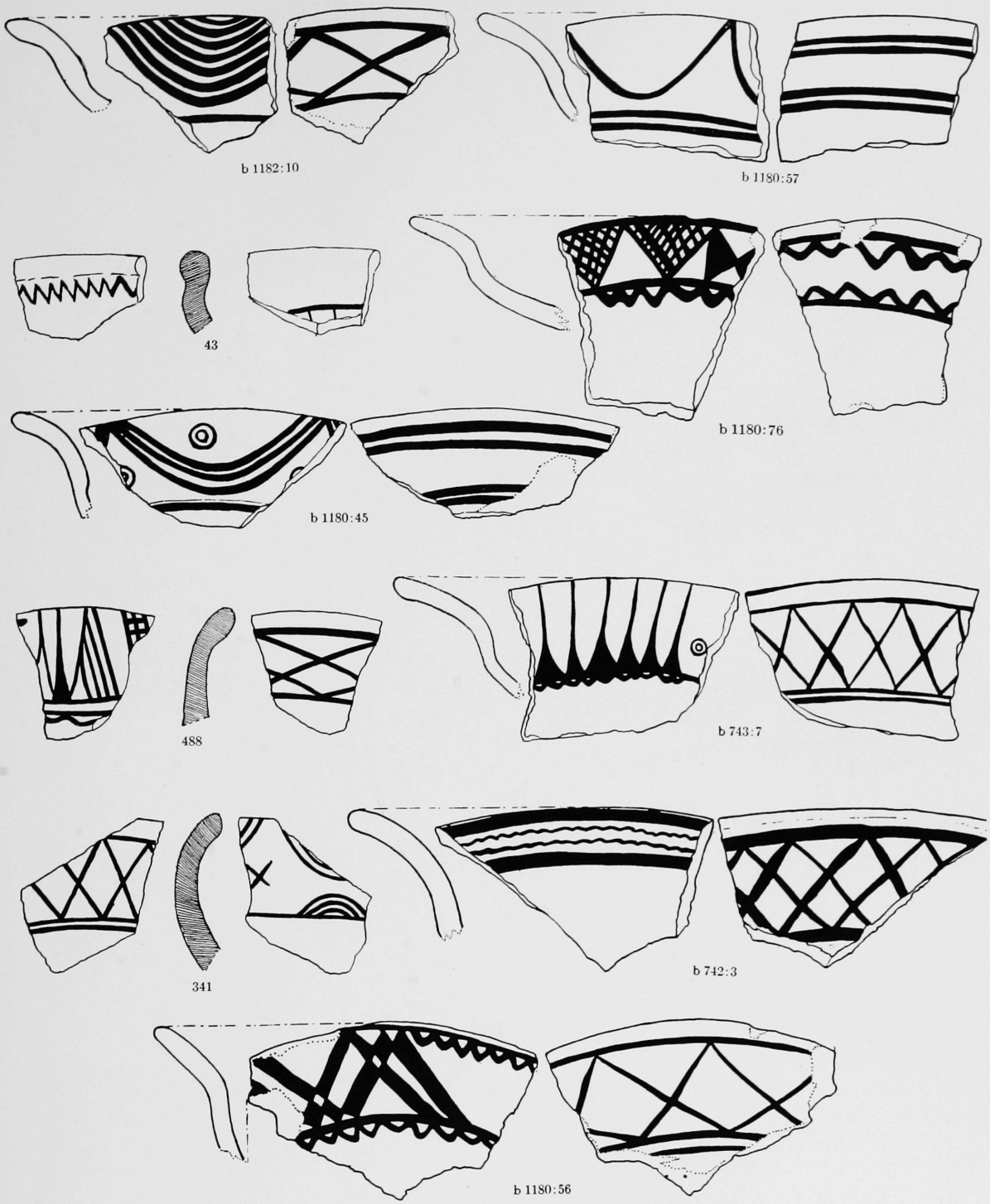

Bowl Sherds of Alişar IV. Scale, 1:2

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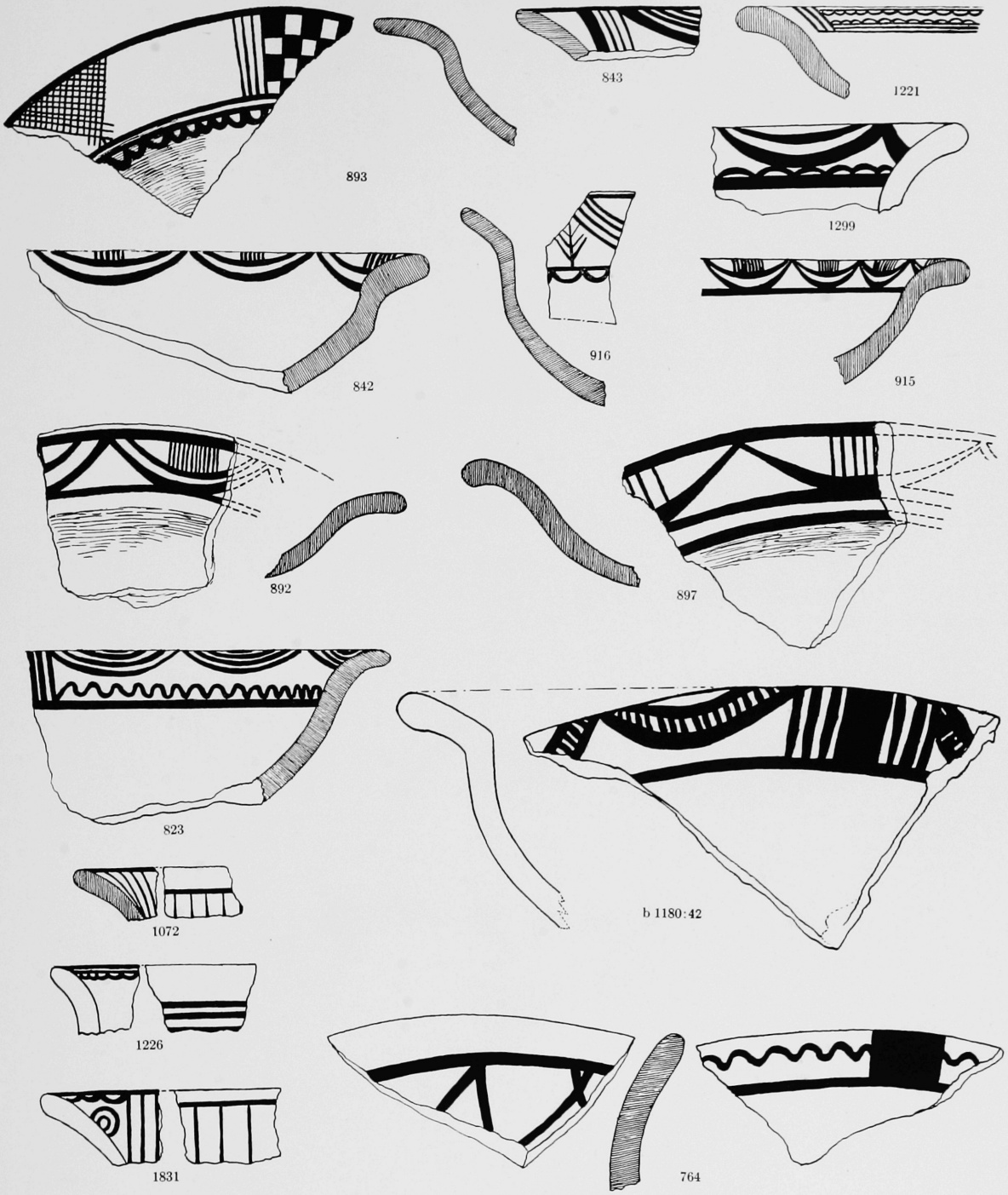

Bowl Sherds of Alişar IV. Scale, 1:2

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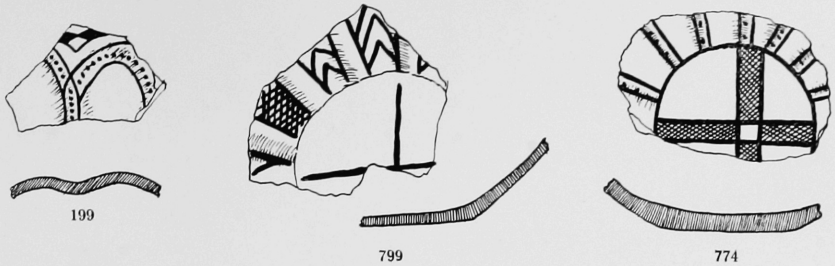
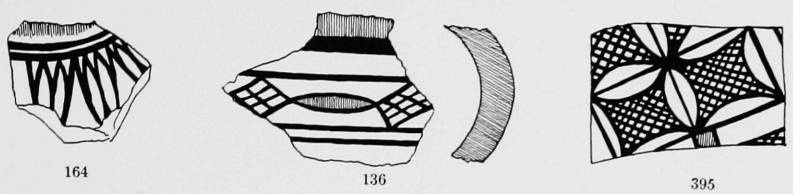
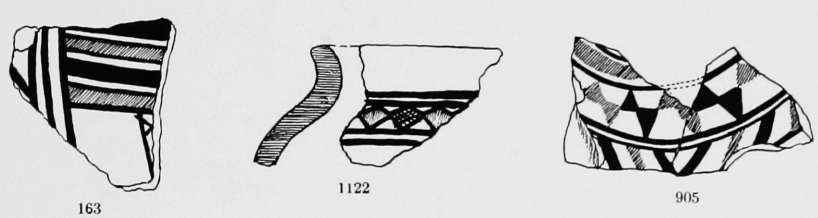
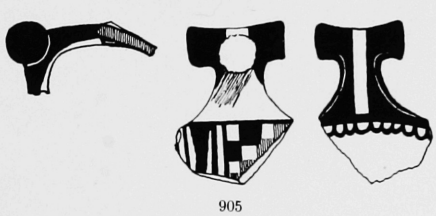
PLATE XXXIII



A.—Alişar IV Sherds with Undulating Surface. Scale, 1:2







B.—Trichrome Sherds of Cups, Pitchers, and Small Jars of Alişar IV. Scale, 1:2

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PLATE XXXIV

Sherds of Cups, Pitchers, and Small Jars of Alişar IV. Scale, 1:2

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Sherds of Large Jars of Alişar IV. Scale, 1:2

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Sherds of Large Jars of Alişar IV. Scale, 1:2

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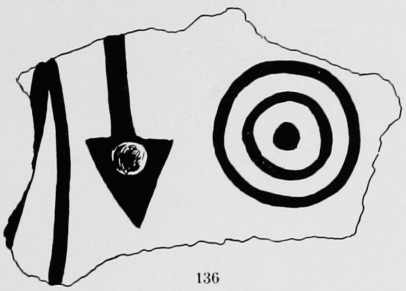
b 742:10

1108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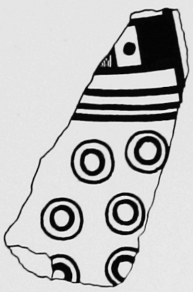
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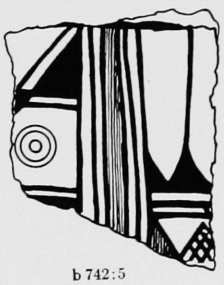
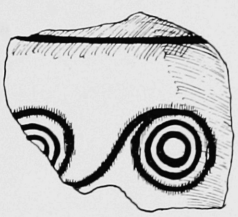
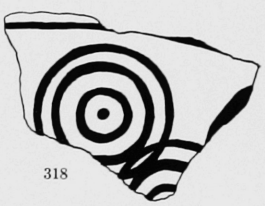

b 742:5

A.—Alişar IV Sherds with Unusual Patterns (Trichrome Except for No. 1108). Scale, 1:2

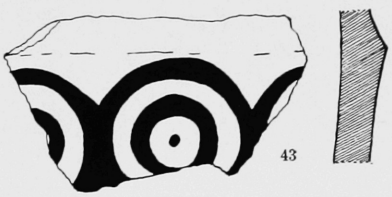
1114*b*


1114*a*


318

1114

497


43

B.—Sherds of Large Jars of Alişar IV. Scale, 1:2

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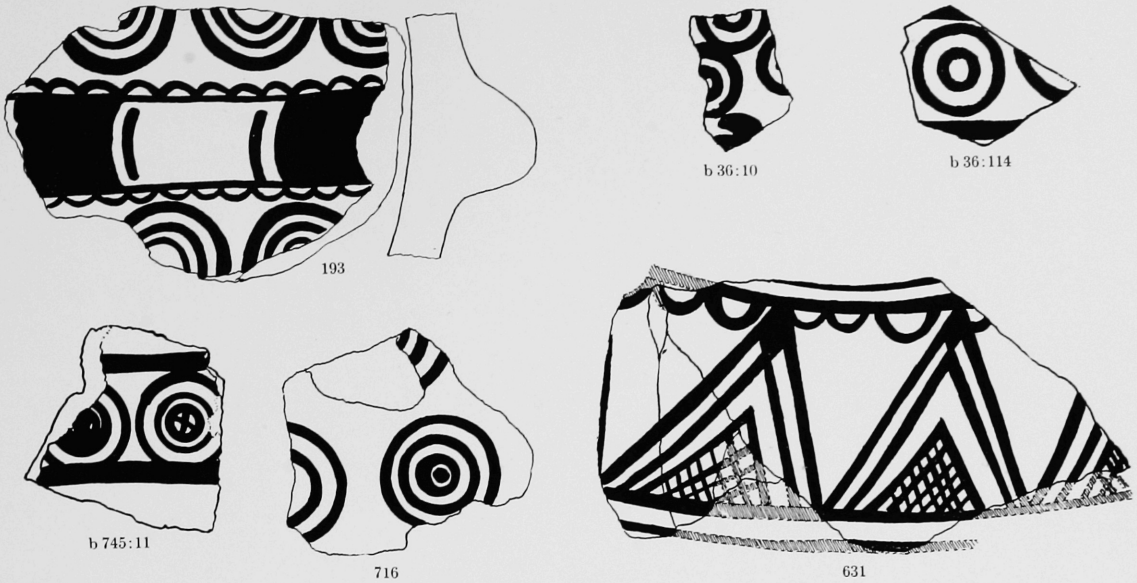

A.—Sherds of Large Jars of Alişar IV. Scale, 1:2

B.—Sherds of a Large Jar of Alişar IV, Fitted Together. Scale, 2:5

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Sherds of Large Jars of Alişar IV. Scale, 1:2

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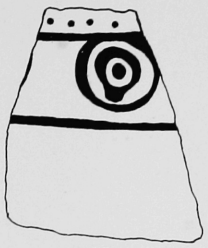
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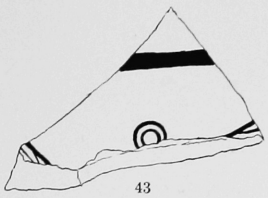
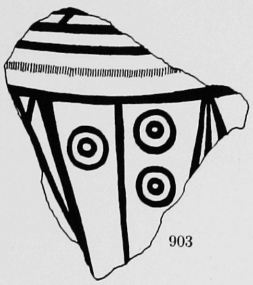

43

P 29

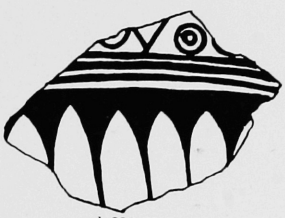

903

b 742:11

876

891

b 36:50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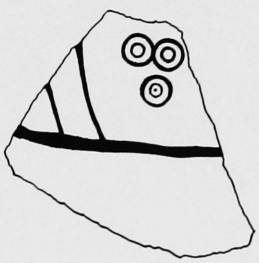
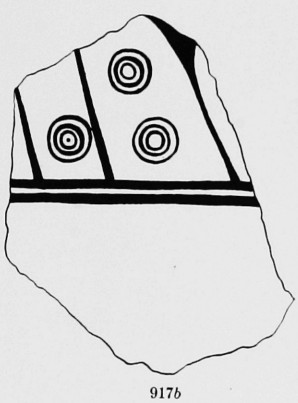
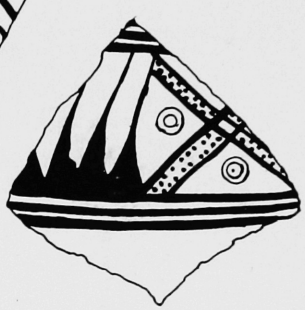

b 36:33

1590

b 745:5


917*b*

b 36:65


b 1182:5

Sherds of Large Jars of Alişar IV. Scale, 1:2

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Trichrome Sherds of Large Jars of Alişar IV. Scale, 1:2

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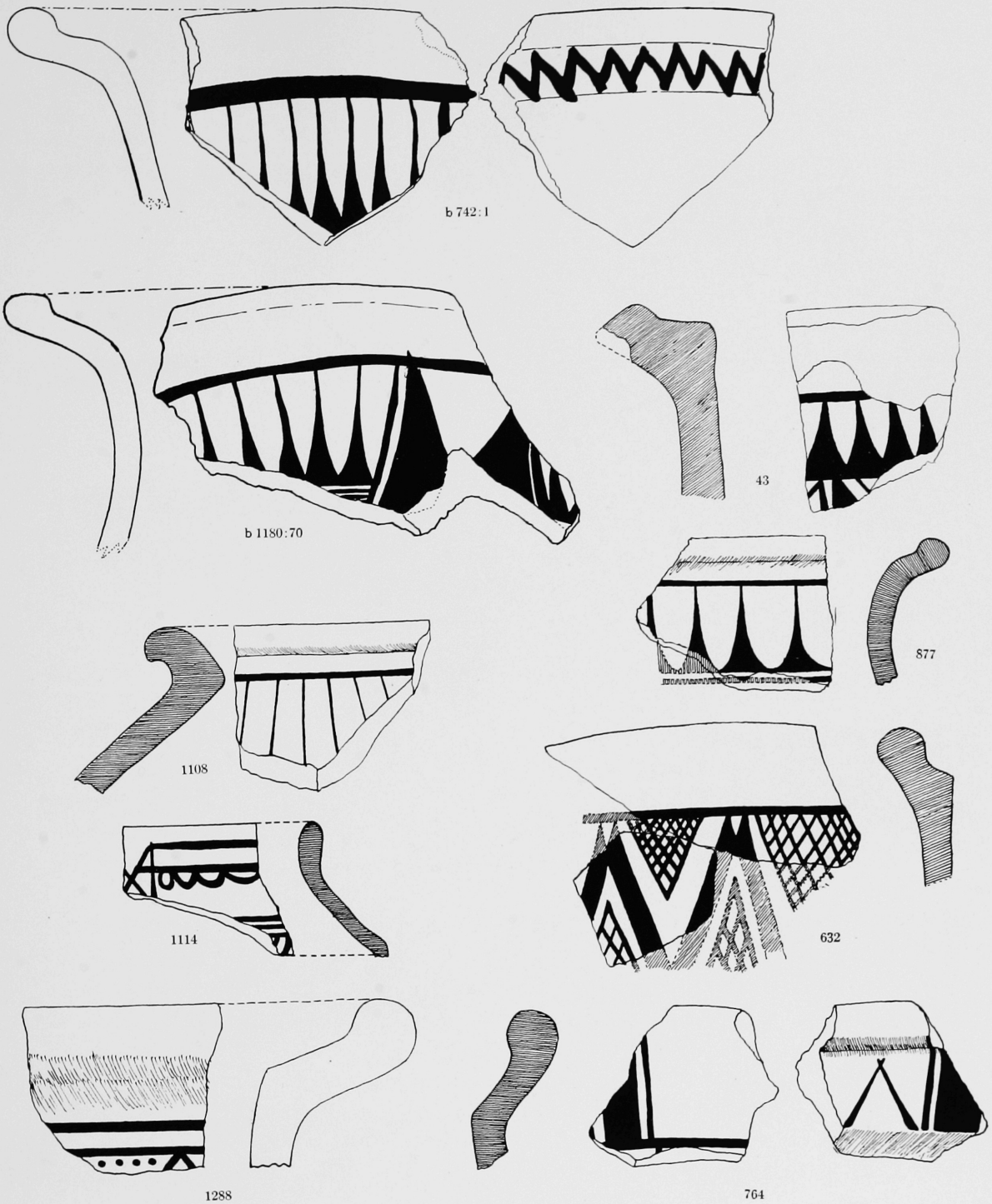

Sherds of Large Jars of Alişar IV, Showing Forms of Rims. Scale, 1:2

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Sherds of Large Jars of Alişar IV, Showing Handles, Forms of Rims, and Modeled Bands. Scale, 1:2

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Sherds of Large Jars of Alişar IV. Scale, 1:2

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Sherds of Large Jars of Alişar IV. Scale, 1:2

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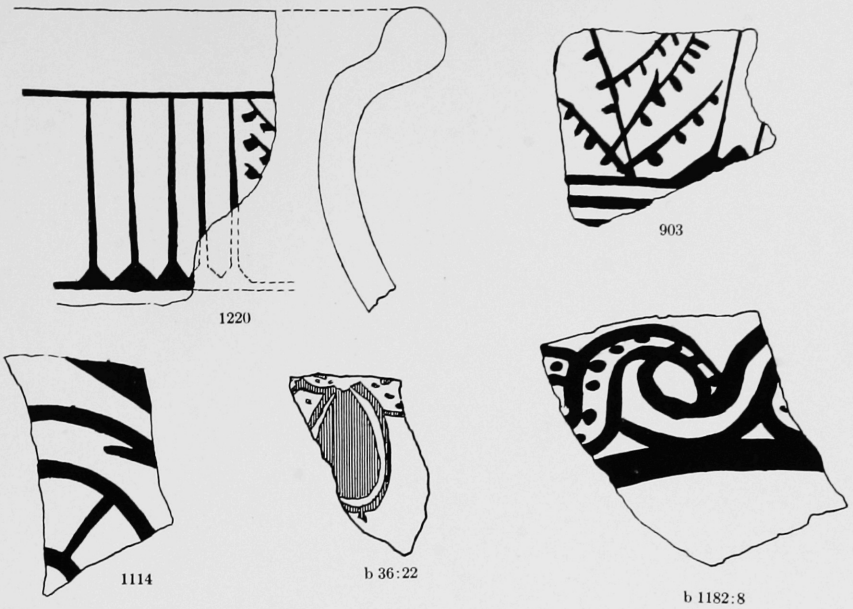
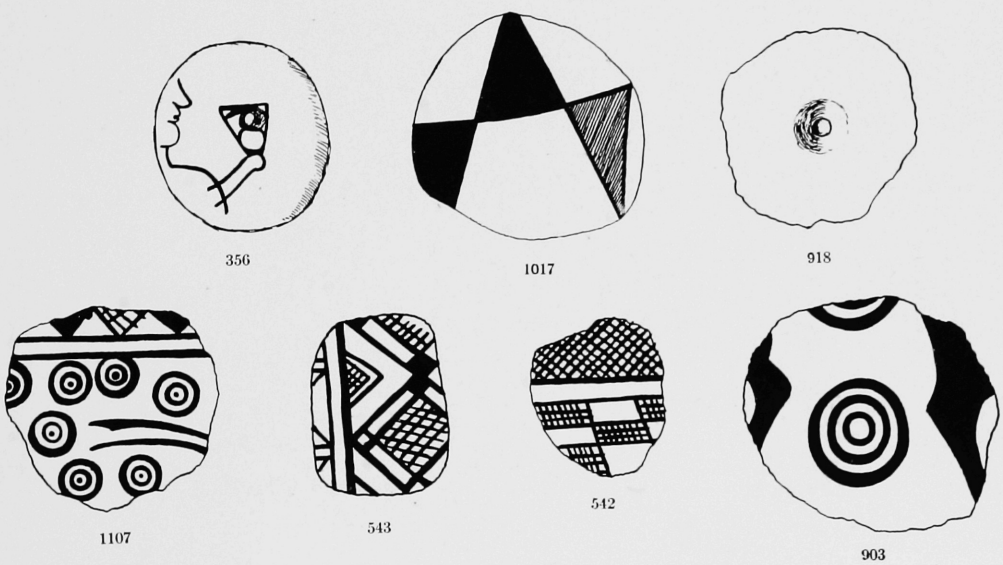


A.—Sherds of Large Jars of Alişar IV. Scale, 1:2



B.—Reground Potsherds of Alişar IV (No. 1017, Trichrome). Scale, 1:2